

# VISHWAKARMA UNIVERSITY

SDG 9 REPORT 2022







# About This Report

Vishwakarma University (VU) is unwavering in its commitment to sustainable development, intricately linked to the United Nations' "Transforming our World: the 2030 Agenda for Sustainable Development." These goals paint a global vision for a brighter future, and VU has taken these goals to heart, weaving them into our very essence. With our motto of unleashing human potential, we're passionate about nurturing an environment where our students grow holistically, ready to tackle life's challenges.

Our campus has transformed into an EcoCampus, a beacon for innovative sustainable solutions. We're all about sustainability and envision a future with a smaller carbon footprint. This report is a testament to our journey, highlighting our partnerships and impactful programs. A notable example is VU's Certificate Programme in Sustainability Management, a partnership with Hof University of Applied Sciences, Germany, which equips students with advanced business management techniques and cutting-edge sustainable practices. It equips students with cutting-edge sustainable practices. The Wilo Foundation-Vishwakarma University is another shining example; it promotes water treatment, purification, and awareness of clean drinking water through its Water Quality Centre of Excellence.

Despite the hurdles posed by the COVID-19 pandemic, our dedication to sustainability remains unshaken. This report provides an insight into the Institute's multifaceted endeavors to achieve the SDGs, spanning teaching, research, outreach, public engagement, and daily operations.

Our commitment extends to developing educated, ethical, and skilled individuals who embrace values of fairness, inclusivity, and excellence. Furthermore, our approach encourages students to actively apply their knowledge, bridging the gap between theory and real-world action.

Vishwakarma University (VU) adopts a participatory development model that fosters active involvement from both students and industry stakeholders. This model is underpinned by the academic philosophy we've developed at VU, which aims to equip students with the skills and attributes needed to navigate the challenges of the 21st century. Our association with Maharashtra State Faculty Development Academy, establishment of VU-Centre for Communication Development, the Sahyadri Communication Project, and VU Legal Aid Clinic are the pillars of VU-iPAR Model that exemplifies harmony with the National Education Policy 2020.

In summary, Vishwakarma University's commitment to sustainable development and the SDGs is deeply ingrained in its ethos. The Institute actively collaborates with diverse stakeholders, implements sustainability across its core operations, and fosters a culture of learning, research, and innovation. Through these collective efforts, VU is dedicated to preparing students to be future leaders who drive positive change and contribute to the greater good of society, in alignment with the global vision of the SDGs.

**Prof. (Dr) Siddharth Jabade**  
**Vice-Chancellor**  
**Vishwakarma University, Pune, India**

## VU's Participation in the THE Impact Rankings 2023

Vishwakarma University (VU) also participated last year in Times Higher Education (THE) Impact Rankings 2023, which looks at global universities' commitment and performance in furthering the Sustainable Development Goals (SDGs).

VU took part in the 4 SDGs listed below plus the mandatory SDG 17 and the results were as follows:

### Overall Ranking 1001+





9 INDUSTRY, INNOVATION  
AND INFRASTRUCTURE



**Build resilient infrastructure,  
promote sustainable  
industrialization and foster  
innovation**

## Industry, Innovation and Infrastructure

Vishwakarma University (VU) is committed to driving positive change through research and innovation that's deeply rooted in the needs of society. At VU, our approach to education, research, and outreach is in sync with the dynamic shifts taking place in both industry and society. Our primary goal in collaborating with the industry is to deliver solutions that not only address real-world challenges but also prioritize social and environmental responsibility, making a significant and lasting impact.

The industry in the context of this region includes large enterprises, small & medium enterprises, social enterprises, start-ups, and independent professionals. Within VU, our transdisciplinary centres of excellence serve as dynamic hubs, facilitating meaningful collaboration with industry partners. These centres are dedicated to nurturing innovation, from the inception of ideas to the tangible impact they bring to the entire value chain. VU inculcates all the unique features in the curriculum, teaching-learning, internships, placements, research, and innovation through various activities. The initiatives for industry connect include:

1. Industry on Campus
2. Centres of Excellence in collaboration with industries
3. Industry Collaborations for sponsored and contract research
4. MoUs with Industry
5. Memberships of Professional Bodies
6. Industry Advisory Board
7. Esteemed Recruiters
8. Events and Sponsorships
9. Representation of Industry Professionals

### Industry-University Interaction (Placement and Career Progression Office)

Vishwakarma University's Career Support Office plays a vital role in connecting final year students with various employment prospects, internships, and paid projects through our comprehensive Campus Placement program. Our extensive network of over 600 active recruiters, industry partnerships, and connections ensures that students have access to relevant job opportunities and career pathways. The Career Support and Placement Cell at VU boasts an impressive network of over 1,200 diverse industry linkages, providing students with extensive opportunities. Additionally, we offer over 1000 student projects and internships to enrich their practical experience. With a roster of more than 600 esteemed campus recruiters and numerous global partnerships, we are dedicated to helping students forge meaningful career paths. We take pride in our commitment to preparing students for the industry and our Placement and Career Progression Assistance Programme (PCPAP), which has led to an impressive track record of securing job offers and successful placements..

<https://www.vupune.ac.in/placement>

### Key thrust areas are as follows;

- To seek inputs for curriculum improvement and alignment.
- To broad base connections with industry professionals across sectors.
- To give a wider industry exposure to students and faculty members.
- To assist the departments is inviting industry experts and organizing events.
- To create opportunities for faculty members and students to work on industry projects.
  - To identify employment, internship, and mentorship opportunities for students.
- To collaborate for innovative projects, entrepreneurship, research, and development.
  - To forge partnerships for value-added courses and hands-on training for students.

### Major activities for career support:

1. Extended career support
2. Career progression pathways
3. Global exposure through academic exchange of faculties and students
4. Promotion of innovation
5. Entrepreneurship Development
6. Proactive Job search training
7. Support for further studies and govt. Job entrance examinations

The Placement and Career Progression Office designs intensive career readiness programmes for every student to make them industry ready and enhance their employment potential. The Placement and Career Progression Office enhances the following areas of student development for better industry relevance:



### Major Initiatives for Industry-University Linkages are as follows:

1. Industry on Campus and Centres of Excellence
2. Representation of industry professionals on various committees
3. Industry Visits, Live Projects, Freelancing, and Shadowing
4. Campus Recruitment Programme and Industry Internships
5. Workshops, Talks, Expert Interactions, and Jury
6. Memberships of Professional Bodies
7. Events and Sponsorships
8. Industry Advisory Boards
9. Incubation Facilities

### Industry Interaction Activities

1. Blended Placement and Career progression assistance training programme for the final year students.
2. Career Orientation Sessions for the First Year Students
3. Summer Internship Briefing for the pre-final year students
4. Industry on Campus activities for students
5. Activities by the Centres of Excellences for students and faculty
6. Recruitment drives for the summer internship and semester-long internships
7. Live Projects opportunities for the students round the year
8. Industry Visits, Hands-on Training, and Workshops by practitioners
9. Recruitment drives for placement and jobs
10. Industry connects and industry outreach work
11. Meetings of the Industry Advisory Boards
12. Participation of Industry Professionals in Board of Studies meetings
13. Training to students on soft skills and technical skills by industry experts
14. Participation in several industry events by faculty and students

<https://www.vupune.ac.in/live-projects/institution-industry-interaction-cell>



## Connectomics - Major event for industry connect

The CONNECTOMICS event, which was a unique undertaking, was organised by Vishwakarma University, Pune, in partnership with Nanyang Technological University, Singapore, and received support from the Confederation of Indian Industry (CII). The event was distinguished by the presence of over 20 renowned speakers, among whom were more than 5 esteemed international speakers. Furthermore, it drew the participation of over 30 Managing Directors, CEOs, and founders, along with an impressive assembly of 50 or more R&D and Innovation catalysts. The event's agenda was structured as follows:

- 1. Inaugural Session:** This segment entailed establishing the context and featured a keynote address.
- 2. Success Stories in Global Industry-Academic Collaboration:** This part of the symposium highlighted instances of fruitful collaboration between industry and academia on a global scale.
- 3. Panel Discussion: Industry Insights on Translational Research and Innovation:** A panel discussion that provided industry perspectives on the subject of translational research and innovation.
- 4. Round Table Discussions:** The round table discussions were characterised by interactions which were engaging and dynamic, featuring the active involvement of over 50 industry participants. These round tables offered a platform for in-depth discussions on priorities and best practices within specific focus sectors. The focus sectors included:
  - a. Advanced Engineering, Manufacturing, Robotics, and AI
  - b. Green Mobility and Autonomous Vehicles
  - c. Digitalization and Digital Transformation
  - d. Sustainability, encompassing Battery and Energy Storage, Water and Membranes, and Waste-to-Energy initiatives.

Brochure of the event -

[https://drive.google.com/file/d/1QrWQcLzvLe716UuB9hRqI6FcKB9ZLS4\\_/view?usp=drive\\_link](https://drive.google.com/file/d/1QrWQcLzvLe716UuB9hRqI6FcKB9ZLS4_/view?usp=drive_link)



Link for symposium website: <https://www.vusymposium.com/>

## VU IQUBE (The Idea, Innovation and Impact Centre)

As beautifully encapsulated in its motto - maximizing human potential, VU, since its inception, has worked endlessly towards creating an enabling environment to ensure the wholesome development of its students. Employing innovative learning methodologies has created an effective amalgamation of didactic and practical learning. This coupled with a responsive and active student community has made the VU campus a productive ground for the germination of new ideas and intellectual activity. Now VU has taken the next natural step in its journey of academic excellence by launching VU IQube, on the 1st of October, 2020, to unleash the creative potential of its students. Focusing on Idea, Innovation, IPR, and Entrepreneurship in a synergetic and integrated way VU IQube seeks to facilitate the culture of innovation in VU and to build an Eco-system that enables self-empowerment.

### Initiatives

#### 1. Outcome Based IPR workshop for Live Projects at VU

Outcome Based IPR workshop organized on 22nd March, 2022. This was for the active projects at Vishwakarma University lead by the honorable Vice Chancellor sir who is a patent agent with an immense experience. There were a total of 15 projects that were identified for potential patent filings. There were numerous topics that were covered in the following sessions. They are as follows:-

- Introduction to patent
- Significance of patent
- Prior art search
- Patent drafting
- Filing and forms of patent

Participants got training on patent drafting and patent search, access to resources for the same



#### 2. World Intellectual Property Day Seminar: Intellectual Property for Creative Minds

On the occasion of World Intellectual Property Day, the University of Vishwakarma organized a guest session in collaboration with the Department of Law. Ms. Lohita discussed about different types of intellectual property and how they help protect property and authenticity. The webinar focused on the need for creativity and innovation as the two key variables that pave the way for development. The speaker explained how intellectual property laws deal with the protection of rights. This can be the means to motivate people to come up with new ideas and inspire them to work on these inventions & develop them to their full potential. Intellectual property and its laws play a role in nurturing creativity. Knowledge of these rights by entrepreneurs is important and necessary



### 3. Speaker session on marketing by Mr Faraz Naqvi

22nd June 2022

The speaker began with an explanation of the importance of research, primary research as well as secondary research. The next thing we explored was 'Finding Niche'. The speaker made us aware of the need to map the size of the market as TAM (Total addressable market), SAM (Serviceable addressable market), and SOM (Serviceable obtainable market). The speaker expanded on following the prevalent market trends and understanding their implications. He emphasized on doing a SWOT analysis (SWOT - Strengths Weakness Opportunity Threats) to try and predict what the market might be in the future. The mentees were also able to understand the 'Types of Marketing' and its division into Inbound-marketing and Outbound - marketing. Inbound marketing is focused on attracting customers to your products and services. Outbound - marketing sends a message to a huge amount of people, in the hopes of making a sale. This strategy is rooted in the thought that the larger the group you message to, the larger the return.

All of these concepts have been very helpful and will certainly pave the way for students who anticipate entering the competitive market in the near future.



### 4. Speaker session on finance by Mr Satyajit Chakraborty

24th June 2022

The speaker started with the importance of the term and concept of Financial Projections also known as Financial Forecast. He explained that a financial forecast is an estimate of future financial outcomes for a company or project, usually applied in budgeting, capital budgeting and/or valuation. Further, the mentees were able to learn the importance of hiring a CA for their business. Finding a strong Co-founder and building a strong team also becomes an important process to help in building any business from the ground up. The next step is to focus on finding the unit metrics of an individual's product.

Finally, the mentees were also able to understand why focusing on your USP (Unique Selling Proposition) becomes significant.



## 5. Out of the Box Thinking for Problem Solving

28 June, 2022

Prof. V. Kamakoti, Director, IIT Madras

In the webinar, the esteemed speaker, Prof. Kamakoti the Director, IIT Madras, talked about the various ways in which we can apply out-of-the-box problem-solving in daily life situations. He explained the importance of this in entrepreneurship and how such entrepreneurs succeed in bringing their ideas to life.

The speaker gave some simple problems, but asked the participants to think creatively. Some questions were, to complete a pattern in Arithmetic Progression (3,5,7,9,11,13,15,17,19, ? Ans. Could be 21 or even 31) but in an unconventional way, to divide a circle into two parts: normally as semi-circles but a more innovative way is in shape similar to the Chinese yin-yang symbol, and so on The speaker then proceeded to word problems that could be solved in more ways than one. The participants were given 20 seconds time to come up with innovative solutions. When the time was up, the speaker gave out one of the solutions and explained it.

Towards the end of the session, the speaker enlightened the audience on how to apply for the Online Blockchain Course, the degree certificate for which will be granted after a proctored examination.



## 6. Krantivan/Smrutivan Field Visit

**Date:** 29th August 2022,

**Location:** Krantivan, Sangli, Maharashtra.

**Overview:** Students and faculty of Vishwakarma University visited the site called 'Krantivan' in the Sangli district.

### Objective:

- To understand the work done by Mr. Samapatrao in the field of Youth Development.
- To identify challenges in the nearby villages.
- To take these challenges to the students of the University for creating innovative solutions.
- To initiate a Social Entrepreneurship Project out of the association with the Ugam Foundation of Mr. Sampatrao.



<https://www.vupune.ac.in/centres-of-excellence/vu-iqube>

## VU Centre of Excellence for Design Thinking and Innovation

**Vision** for Design Thinking and Innovation is to collaboratively develop an eco-system for seeding and nurturing a spirit of curiosity, logical thinking, ideation, design thinking, creativity, innovation, collaboration and social awareness to facilitate the transformation of ideas of students and faculty to techno-commercially viable and relevant projects useful for society that enable the betterment of human kind.

**Mission** for Design Thinking and Innovation is to transform ideas into innovations using our VU/BU Design Thinking & Innovation process in order to make the world a better place.

### Goals

Build our brand and contribute to the betterment of society by applying and expanding the Design Thinking & Innovation body of knowledge.

To enable platform for collaboration, cooperation and operation for Binghamton University and Vishwakarma University (and Institutes) student and faculty

To create a design thinking and problem solving framework.

To develop multidisciplinary approach to system design.

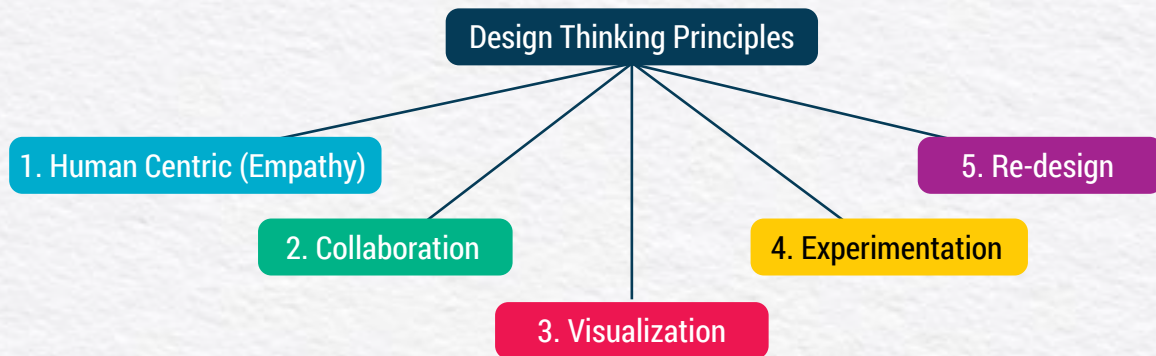
To synergize expertise of center-of-excellences in VU for project building.

To develop cross-cultural design thinking ability.

To promote ability to innovate

## Principles for Design Thinking

The VU/BU Design Thinking Principles - There are five core principles.



### ACTIVITIES

SR. NO	ACTIVITIES
01	<b>Using Design Thinking to Reimagining a better Future</b> Date -16/02/2022 Time- 6pm-7pm Speaker - Prof. Micael Testani
02	<b>Global Ev Market data and Exploration</b> Date -16/03/2022 Time- 6pm-7pm Speaker- Dr. Yong Wang
03	<b>Design Thinking</b> An Innovation approach that draws from designers toolkits to integrate the needs of people. Date- 25/03/2022 Time -10.30am – 5.30am Venue- Vishwakarma University, Auditorium Speaker –Prof. Micael Testani , Prof. Kailas Patil, Prof. Apurva Thosar, Prof.Prashant Acharya
04	<b>Design Thinking Innovation workshop For World Wisdom School</b> Date- 13/01/2022 Time – 8am-9am Speaker - Prof. Micael Testani

NAME OF THE COPYRIGHTS	COPYRIGHT APPLICANT NAMES	STATU
Design Thinking Process	Prof. Dr. Kailas R. Patil	Registered

<https://www.vupune.ac.in/centres-of-excellence/centre-of-excellence-for-design-thinking-and-innovation>

<https://research.vupune.ac.in/copyrightinnovation>

## Innovation in Arts

VU facilitates the promotion of arts and the appropriate use of design principles, technology capabilities, commercial essentials, social factors, and ethical practices in the field of art are at the core of the University's efforts.

To nurture natural curiosities, passions and penchant towards arts and culture, VU has started an interactive forum to engage artisans and craftsman with students. The artisans with rich experiences are invited to the campus for interactions, to showcase their art, and introduce students with techniques of traditional artwork.

The students also get an opportunity to work on live projects with industry partners under the "Industry on Campus" initiative. The students and faculty work closely on the not-for-profit social initiatives like educational paintings and drawings on a kindergarten school building walls in association with ProCluster Business Association – a techno-social NGO. The goal is to develop learning interest among children from deprived communities.

Students work on national and international projects for the public good and benefit from entrepreneurial opportunities. VU promotes the use of sustainable materials through the Eco-Campus initiative and collaborations with local artisans. The material used and promoted so far in the artefacts and designs includes Bamboo, Cloth, Wood, etc. with the emphasis to upcycle the use of materials available locally. The Department of Art works closely with the Department of Design, School of Technology, and other schools within VU like the Commerce and Management, Humanities and Social Sciences; Journalism and Mass Communication, etc. The artisans with rich experience come to the campus for interactions, to showcase their art, and introduce students to techniques of traditional artwork. VU organizes annual events to showcase and commercialize the handmade work of the students and they also get to work on live projects with industry partners under the "Industry on Campus" initiative. The external collaborations with local enterprises, global firms, professional bodies, and foreign universities have helped to promote art.

<https://www.vupune.ac.in/department-of-design>

<https://www.vupune.ac.in/department-of-animation>

Faculty of Art and Design of Vishwakarma University filed following designs:

NAME OF THE DESIGN	DESIGN NUMBER
RED BIN-Wet Waste Collector	336337 - 001
Dispenser	336334 - 001
Momento - the Spire of Sustainable Education	336335 - 001
Momento - University in Diversity	336336 - 001

<https://research.vupune.ac.in/design>

## Major Workshops And Sessions To Enhance Industry Connect

Vishwakarma University diligently orchestrates a series of expert sessions and workshops on a continual basis to enrich the competencies of both its esteemed faculty and inquisitive student body. These initiatives not only serve to further the academic prowess of our institution but also have a pronounced impact on industry relevance. By fostering a dynamic learning environment that remains attuned to contemporary trends and demands, we strive to produce graduates who are not only academically adept but also industry-ready, making significant contributions to their respective fields.

## 1. Budget Day Workshop

The Banking Day Workshop, held from January 1st to January 5th, 2022, at Vishwakarma University, was a crucial event designed to provide students in the fields of commerce and management with a unique opportunity to gain an in-depth understanding of the Union Budget for the upcoming fiscal year. The Union Budget is a pivotal financial event, shaping the economic direction of the nation. By conducting this workshop during the period when the budget was released, students were given the opportunity to witness the nuances of this critical document through live telecasts and expert insights.

This immersive event wasn't limited to passive observation alone. In addition to the live telecast sessions, the workshop also featured engaging activities such as a poster competition and a quiz focused on the Union Budget of 2022. These activities aimed to foster a hands-on understanding of the budget, encouraging students to analyze, interpret, and critically engage with the financial decisions that would impact the nation's economic trajectory in the year ahead. In essence, the Banking Day Workshop served as a platform for students to not only gain knowledge but also to actively participate and immerse themselves in the intricacies of financial planning and decision-making at a national level.

[https://www.instagram.com/p/CZZYknbPsKI/?utm\\_source=ig\\_web\\_copy\\_link&igshid=MzRIODBiNWFIZA==](https://www.instagram.com/p/CZZYknbPsKI/?utm_source=ig_web_copy_link&igshid=MzRIODBiNWFIZA==)

## 2. Expert Session On Design Thinking

On the 25th of March, 2022, the Centre of Excellence, Design Thinking & Innovation successfully organized an expert session focused on the principles and applications of Design Thinking. The featured expert for this enlightening session was none other than Prof. Michael V Testani, who hails from SUNY Binghamton University in New York, USA.

The event spanned an entire day, allowing ample time for participants to immerse themselves in the concepts and practices of Design Thinking. Prof. Michael, a highly respected authority in this field, shared his extensive knowledge and experience, shedding light on the inner workings of various industries. His insights were aimed at providing valuable guidance and understanding to both faculty members and students in attendance.

Throughout the workshop, participants had the opportunity to delve into the methodologies and strategies of Design Thinking, gaining practical insights that could be applied to real-world challenges. The event not only served as a platform for learning but also as a source of inspiration, fostering a deeper appreciation for the innovative thinking required to address complex problems and drive positive change within various industries.

This session was also repeated on 17th October, 2022 for first year students of Engineering and Art & Design departments.

Link for Facebook post for event in March, 2022

<https://www.facebook.com/vishwakarmauniversitypune/photos/a.121728789554467/533118785082130/>

Link for Facebook post for event in October, 2022

[https://www.linkedin.com/posts/vishwakarmauniversity\\_vishwakarmauniversity-pune-designthinking-activity-6987365486250348544-WgzE/?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/vishwakarmauniversity_vishwakarmauniversity-pune-designthinking-activity-6987365486250348544-WgzE/?utm_source=share&utm_medium=member_desktop)



### 3. Faculty Development Program (FDP) on NSSO/NFHS Unit-Level Data Extraction

The Research Cell of Vishwakarma University, Pune, organized a 7-day Faculty Development Program (FDP) on NSSO/NFHS Unit-Level Data Extraction using STATA from July 25th, 2022, to July 31st, 2022, conducted in an offline mode. The FDP was extremely fruitful as the acquisition of skills related to NSSO/NFHS unit-level data extraction using STATA holds significant importance for faculty members and carries substantial relevance in various industries. To cite a few:

**I. Enhancing Research Capabilities:** Faculty members, particularly those engaged in research and academia, benefited immensely from mastering data extraction tools like STATA. These tools will enable them to access and analyze extensive datasets, which is crucial for conducting high-quality research and contributing to their respective fields of expertise.

**II. Improved Data-Driven Decision-Making:** Industries, both public and private, rely heavily on data to make informed decisions. Faculty members trained in STATA and similar tools can bridge the gap between academia and industry by producing graduates equipped with practical data analysis skills, thus fostering data-driven decision-making in organisations.

**III. Industry-Ready Graduates:** Equipping faculty members with STATA proficiency ensures that they can train students to be industry-ready. Graduates who are well-versed in data extraction and analysis tools are highly sought after by employers.

**IV. Economic and Social Implications:** The data extracted through tools like STATA often pertains to socio-economic factors. Understanding and interpreting this data is crucial for both faculties and students, as it empowers them to assess and address issues related to public policy, social development, and economic growth.

**V. Research Collaboration:** Faculty members with proficiency in STATA can engage in collaborative research projects with industry experts and organizations.

<https://www.facebook.com/vishwakarmauniversitypune/photos/a.535276068199735/604704674590207/>

### 4. Entrepreneurship Workshop

On the 6th of October 2022, VU-IQUBE hosted an engaging webinar as part of their entrepreneurship workshop. The webinar, titled "Entrepreneurship - Starting Your Own Business and Key Lessons About Persistence," was presented by Anshuman Agarwal. This workshop was of great importance for budding entrepreneurs as it offered valuable insights and lessons on starting one's own business and the vital trait of persistence. Such workshops serve as a source of inspiration and practical knowledge, helping aspiring entrepreneurs navigate the complexities of the business world, fueling their passion, and equipping them with the tools needed to succeed in their entrepreneurial journey.

[https://www.linkedin.com/posts/vishwakarmauniversity\\_vishwakarmauniversity-webinar-entrepreneurship-activity-6983490212442124288-fRw-/?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/vishwakarmauniversity_vishwakarmauniversity-webinar-entrepreneurship-activity-6983490212442124288-fRw-/?utm_source=share&utm_medium=member_desktop)

### 5. Integrated Environmental Solutions (IES) Workshop

The two-day training program (14-15th October, 2022) on "Building Performance Analysis Using IES VE," organized by Vishwakarma University in collaboration with Integrated Environmental Solutions (IES), was held to equip participants with essential skills and knowledge related to building performance analysis. This event took place as an opportunity to foster expertise in creating energy models, conducting simulations, and interpreting results within the IES Virtual Environment (VE) platform.

The significance of this training session lies in its potential to empower participants with practical skills and understanding in the field of building performance analysis. In today's environmentally

conscious world, the need for sustainable building practices is paramount. Such sessions are crucial for professionals in the architecture, engineering, and construction sectors, as they enable them to design and analyze buildings for optimal energy efficiency, sustainability, and environmental impact. By gaining hands-on experience with IES VE, participants can contribute to the development of eco-friendly, energy-efficient structures, aligning with global sustainability goals and staying competitive in their respective industries.

[https://www.linkedin.com/posts/vishwakarmauniversity\\_vishwakarmauniversity-pune-trainingprogramme-activity-6985130008763617280-SPek/?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/vishwakarmauniversity_vishwakarmauniversity-pune-trainingprogramme-activity-6985130008763617280-SPek/?utm_source=share&utm_medium=member_desktop)

## 6. Expert session on Design Business

The discussion hosted by the Department of Interior Spaces with Ar Priya Gokhale, the Founder of WIDE Angle Forum, on the topic of “Design & Business” on October 13, 2022, held significant importance for students of Architecture. To cite a few:

The session on the intersection of design and business offered architecture students valuable insights into the practical aspects of their field. It facilitated networking opportunities with industry professionals, emphasizing the importance of design’s practicality, cost-effectiveness, and sustainability. The session exposed students to diverse perspectives, broadening their horizons, and inspiring potential entrepreneurial endeavors in design and architecture. The real-world insights and industry relevance underscored the significance of understanding both the creative and business aspects in students’ future careers, enhancing their preparedness for success in the field.

[https://www.linkedin.com/posts/vishwakarmauniversity\\_vishwakarmauniversity-interiorspaces-session-activity-6984059571208130560-wmM6/?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/vishwakarmauniversity_vishwakarmauniversity-interiorspaces-session-activity-6984059571208130560-wmM6/?utm_source=share&utm_medium=member_desktop)

## 7. Intellectual Property Workshop

Knowledge of Innovation and Intellectual Property Rights landscape becomes indispensable while translating ideas into useful, workable solutions with tangible benefits. This program sought to introduce the students to the basic concepts of IPR and the role of the same in the Innovation Ecosystem. It was an outcome based, application oriented course that aimed at challenging the conceptual and analytical skills of students. Students gained an understanding of:

- Basic concepts with respect to Intellectual Property Rights
- An insight into the world of innovation
- Practical application of IPR in the realm of innovation
- Basic legal framework governing IPR at the national and international levels

<https://www.facebook.com/vishwakarmauniversitypune/photos/a.535276068199735/672697444457596/>

## 8. Design and Critical Thinking workshop

The session on “Design for Special Needs” by Nupura Kirloskar on October 10, 2022, was important as it:

- I. Promoted inclusivity and empathy in design.
- II. Equipped professionals with specialized skills.
- III. Addressed legal and ethical considerations.
- IV. Met a growing market demand.
- V. Encouraged innovative problem-solving.
- VI. Had a significant social impact by improving the quality of life for individuals with special needs.

<https://www.facebook.com/artsanddesignVU/photos/a.114518100154836/613829883556986/>

## 9. Ideasutra

The Faculty of Art and Design and the Department of Animation and Multimedia at Vishwakarma University, in collaboration with Mr. Shashikant Gawali, organised a public service campaign workshop titled "Ideasutra" on the 15th of November. Mr. Shashikant is known for his transformative impact on the careers of students and professionals in creative advertising and art.

[https://www.linkedin.com/posts/vishwakarmauniversity\\_vishwakarmauniversity-pune-artanddesign-activity-6996517300572942336-90FB/?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/vishwakarmauniversity_vishwakarmauniversity-pune-artanddesign-activity-6996517300572942336-90FB/?utm_source=share&utm_medium=member_desktop)

## 10. National E-Seminar

The National E-Seminar on Blockchain Technology and Smart Contracts in Law, organised by the Department of Law, played a pivotal role in imparting essential knowledge and awareness about Blockchain Technology (BCT) to approximately 300 students from various regions of India. It was a significant event that contributed to the broader understanding of the implications of this emerging technology in the field of law, fostering a more informed and tech-savvy legal community ready to address the challenges and opportunities brought by blockchain innovations.

[https://www.linkedin.com/posts/vishwakarmauniversity\\_vishwakarmauniversity-pune-departmentoflaw-activity-6993519094947827712-j4BN/?utm\\_source=share&utm\\_medium=member\\_desktop](https://www.linkedin.com/posts/vishwakarmauniversity_vishwakarmauniversity-pune-departmentoflaw-activity-6993519094947827712-j4BN/?utm_source=share&utm_medium=member_desktop)

## MoUs Industry, Government or any other Organisations

The Memorandums of Understanding (MoUs) serve as vital instruments for enhancing and solidifying the collaboration between academia and industry. These agreements are established with esteemed entities that encompass a diverse spectrum, including large enterprises, MSMEs (Micro, Small, and Medium Enterprises), Professional Bodies, startups, and Social Organizations, all of which operate at various scales, be it regional, national, or international. Each of these partnerships is meticulously structured with clearly defined scopes, well-defined objectives, and dedicated teams engaged in fostering the collaborative efforts.

The scope of work is mutually decided and consists of aspects like follows:

- Researching emerging issues in the industry
- Providing training to students, teachers, and industry professionals
- Facilitating projects and internships by students in the industry
- Supporting innovations, new projects, and entrepreneurship
- Promoting projects for product development or process developments
- Strengthening efforts to enhance employability of students

The MoUs are signed with and active engagement is going on with the following organizations:

ORGANIZATION	NATURE OF LINKAGE/ COLLABORATION	BRIEF ABOUT ORGANIZATION
Buldhana Urban Cooperative Credit Society	Industry Participation in Curriculum Design and Delivery – Micro-Finance	Buldana Urban was established in 1986, with 456 branches in 4 states of India as of today. With an aim to bring industrial perspective in our curriculum and to enable industry participation in curriculum design VU collaborate with Buldana Urban.
Tata Technologies Ltd.	Setting up competency centre	Tata Technologies Limited is a company in the Tata Group that provides services in engineering & design, product lifecycle management, manufacturing, product development, and IT service management to automotive and aerospace original equipment manufacturers & their suppliers.

ORGANIZATION	NATURE OF LINKAGE/ COLLABORATION	BRIEF ABOUT ORGANIZATION
Techniche Engineering P Ltd	To develop transdisciplinary Competency Centres	Techniche Engg. Pvt. Ltd. have know-how in the domain of risk & safety studies and training for various industries.
Inflexion Analytix P Ltd	Centre for Artificial Intelligence & Advanced Analytics (CAIA)	Inflexion Analytics was founded to help ambitious companies compete with larger competitors by providing access to the same high quality data analytics services at a market leading price.
Indian Society for Training & Development	Conducting joint research on emerging issues in training and development	Indian Society for training & development involved in the area of training and development of human resource from government, public and private sector organizations & enterprises, educational and training institutes and professional bodies.
Queen Mary's Technical Institute	To support differently abled soldiers and their dependents.	Queen Mary's Technical Institute, earlier known as Queen Mary's Technical School for Indian Disabled Soldiers, was founded by Lady Marie Willingdon
INFLIBNET Centre	To promote open access to scholarly content generated in universities	INFLIBNET Centre, an Inter-university Centre of the University Grants Commission, as its mandate, promotes open access to scholarly content generated in universities.
Seiler Garepa India Pvt. Ltd	Conducting research on emerging issues in the industry	Seiler Garepa India Pvt. Ltd. is established with the mission of Make in India. It's a joint venture between Garepa Engineers and M/s Seiler Vakuumtechnik GMBH.
IES India Ltd	Authorize Training Partner	Integrated Environmental Solutions Ltd is a software and consultancy company that specializes in building performance analysis. IES create software tools for designing and operating energy efficient buildin
Dr. L. Subramaniam Foundation	To provide learning curriculum as per UGC guidelines relating to music courses	Subramanyam foundation is engaged in music education
Confederation of Indian Industry	Yuva vision to influence inspire and motivate millions of students across the country	Young Indians (Yi) is an initiative and integral part of the Cil formed with an objective of creating a platform for Young Indian's to realize the dream of a developed nation
Young Indians Wilo Mather and Platt Pumps	To develop Vertical Sewage Treatment Plant	Wilo SE is a European manufacturer of pumps and pump systems for the building technology, water and industrial sectors with headquarters in Dortmund, Germany.
Ogee Studio Pvt. Ltd.	Develop courses on user experience and user interface design	Ogee Studio specializes in the design and development of compelling, modern, rich user experiences (UX & UI) and interactive visualizations for complex information systems in the B2B space.

ORGANIZATION	NATURE OF LINKAGE/ COLLABORATION	BRIEF ABOUT ORGANIZATION
Industrial Metal Powders India P Ltd.	Conducting research on emerging issues in the industry	Industrial Metals Powders (India) Pvt. Ltd is in the business of supply of electrolytic iron powder and other iron components to various industrial, nutritional, cosmetic and other applications.
Mahesh Industries Group (MIG)	Interface with micro, small and medium Enterprises	It is not for profit organisation, committed to promote and encourage new age entrepreneurs and be a networking platform for fellow Maheshwari Industrialist. Collaboration provides students an interface with micro, small and medium enterprises
TGC Technologies Pvt. Ltd.	Capacity building and projects in gamification	VU and TGC decided to work together with a vision of Conducting research on emerging issues in the industry related to gamification and allied disciplines, by engaging a cross-functional specialized group of teachers and students on the gamification projects.
Jnana Prabodhini's Institute of Psychology (JPIP)	Psychometric assessment and counselling	Jnana Prabodhini's Institute of Psychology (JPIP) is an offspring of Jnana Prabodhini - the mother Institute and a psychology wing of Jnana Prabodhini Sanshodhan Sanstha (JPSS) and it is affiliated to the University of Pune as a research centre.
Unity Technologies Ltd	Unity academic training partner	UTECH has developed a game creation system and rendering engine known as unity products (as defined below) and grants to certain individuals and organizations nonexclusive licenses to use the Unity Products for the development of 2D, 3D and Virtual Reality / Augmented Reality / Mixed Reality content.
Riskpro management consulting p Ltd	Conducting research on emerging issues in the industry	Riskpro Management Consulting Pvt. Limited is one of the leading management consultancy firms in the fields of forensic accounting, due diligence, digital forensics and verification services. market intelligence for banking, insurance and corporate sector companies with use of advanced information technology and investigative tools.
Accurate Gauging	Oxygen generator system design and develop	Accurate is a pioneer in the field of metrology in India that believes in partnering quality metrology solutions which are delivered to various industry segments such as automobile, engineering, aerospace, railways, energy, oil and gas, medical engineering, government sector, and technical education.
Jardins Consultants	Development and delivery of educational programmes	Dealing with senior level negotiations and connections with individuals and companies to facilitate commercial relationships with companies and other organisations in India.

ORGANIZATION	NATURE OF LINKAGE/ COLLABORATION	BRIEF ABOUT ORGANIZATION
KPRC Partners LLP	Development of online course/s	KPRC Partners LLP is limited liability partnership firm and it provides Legal Consultancy and advisory Services including corporate secretarial compliances services. KPRC is also engaged in development and delivery of educational programs at different forums for undergraduate and postgraduate students.
Entrepreneurship Development Center	Conducting IP related talks/workshops	It nucleates and nurture technology and knowledge-based enterprises for India by leveraging the scientific and engineering competencies of the institutions
Schmersal India Private Limited	Development of online course/s	Schmersal is engaged in manufacturing and trading a wide range of switching products to enhance the safety of men and machines.
IoTIoT	Organizing workshop	To bridge the industry-academia gap using a learn by doing approach
Wizcraft MIME	Innovation and technology development, facilitation and capacity development	Wizcraft Management Institute of Media and Entertainment
A&I Digest	Conducting research on emerging issues in the industry	A&I is a forum for architects and interior designers, publications, design exhibitions, events, seminars, etc.
ASSOCHAM	Membership	The Associated Chambers of Commerce and Industry of India is a non-governmental trade association and advocacy group based in New Delhi, India. The organisation represents the interests of trade and commerce in India, and acts as an interface between issues and initiatives.
Robonik India P Ltd.	To the design and development of point-of-care diagnostic devices and its specific features	Robonik india private limited, is a manufacturer, supplier and exporter of this impeccable range of diagnostic equipment.
DCF Ventures LLP	Service Providing	DCF Ventures connects global start-ups with Indian corporations looking at innovation. Apart from this the company provides innovation consulting for corporations and governments.
Tata Consultancy Ltd	To provide TCS application system and TCS service Environment	TCS industry honour programme, is a set of structured industry designed courses in an industry relevant domain or technology offered to the institutions, institutions can integrate this set of courses with their existing degree programs to create a specialization degree in the industry relevant domain or technology

ORGANIZATION	NATURE OF LINKAGE/ COLLABORATION	BRIEF ABOUT ORGANIZATION
Research for Resurgence Foundation (RFRF), Nagpur	Collaborative research and innovation	The RFRF is a multi-domain research institute and a network hub of research and allied activities in academics and industrial sector.
Design Media and Edutainment solution Pvt. Ltd	Industry Partner to deliver courses	Design- Media & Edutainment Solutions is a renowned design solutions company providing dedicated services in advertising and film design verticals.
Ethnus Blueminds Consultancy LLP	Finishing School Training	Ethnus offers industry-recognised certification programs in emerging technologies. It prepare learners for the future of work, training people in skills companies need.
Blueminds Consultancy LLP	Consultancy Services on social media	Blueminds offers services in career counselling, job search strategy & personal branding, resume building/linkedin profile building & effective interviewing skills
Bindurekha Fashion Studio	Conducting contemporary research in the area of ethnic apparel and jewellery design	Bindurekha Fashion Studio is label in premium range designer fashion jewellery based in Pune, design, manufacture and supply to leading apparel stores and brands throughout India
IMS India	Examinations training, guidance and support.	IMS is one of India's pioneering institutions in management education training, and was single-handedly responsible for building awareness
Mr. Shantanu Kulkarni	Development of online course/s	
The Indus Entrepreneurs Association Pune Chapter	To promote creation of high impact start-ups that generate social and economic value for Indian society and the world-at-large.	TiE is a non-profit, global community welcoming entrepreneurs from all over the world. They believe in the power of ideas to change the face of entrepreneurship and growing business
Sahyadri Farmers Producer Co. Ltd	To understand the model of farmer producer companies	SFPCL is India's one of the largest farmers producer company which is 100% farmed owned, professionally managed, grower producer company, which has business of producing, and supplying fruits and vegetables, fruit pulps, purees and pastes of fruits and vegetables and related products.
Teenzclap Futureworks (OPC) Private Limited	Delivering skill-based course/s	Teenzclap's mission is to help learners achieve success with empathy and focus on impact-led outcomes, one of the least understood aspects of developing self.
ANA Cyber Forensic Pvt. Ltd., Pune	Development of online courses in field of cyber security	ACF provides services into cyber security along with compliances, digital forensics, cyber laws and training.

ORGANIZATION	NATURE OF LINKAGE/ COLLABORATION	BRIEF ABOUT ORGANIZATION
Kusum Life Science	Consulting services	A Kusum Life science is a preclinical contract research organization to provide quality preclinical, pharmacology, analytical and animal supply services
JT Foundations (NGO)	Development of Online Courses in field of Diabetes and Obesity Management	JT Foundations is a non- governmental organization registered under section 8 of the companies act, 2013.
Willo Mather and Platt pumps pvt.ltd	Faculty of art and design working on Graphic design on theme of Culture, for Willo.	The Wilo Group is one of the world's leading premium providers of pumps and pump systems for the building services, water management and industrial sectors. In the past decade, we have developed from a hidden champion into a visible and connected champion. Today, Wilo has around 8,000 employees worldwide and we are in your region.
Centre for Police Research Pashan Road, Pune		CPR is ideal for research activities and training envisioned to conduct and promote in-depth studies and fundamental and applied research pertaining to Police and related social as well as behavioral issues.
Extentia Information Technology, Pune		Extentia Information Technology, Pune. offer software development services with proven expertise in best-in-class tools, processes, and systems that we employ to deliver solutions that impact enterprises, organisations, and consumers.
Entrepreneurship Development Centre (Venture Centre)	Strategic collaboration for incubation and startups	The Venture Center is a technology business incubator specializing in technology startups offering products and services exploiting scientific expertise in the areas of materials, chemicals and biological sciences & engineering. Venture Center strives to nucleate and nurture technology and knowledge-based enterprises by leveraging the scientific and engineering competencies of the institutions in the "Pune region" in India.
ASSOCHAM	Lecture Series in Architect Department	ASSOCHAM, India's oldest apex chamber, leverages its vast network of over 4,50,000 members, including MSMEs, to enhance the nation's global competitiveness and strengthen its domestic ecosystem. With a focus on sustainability, empowerment, entrepreneurship, and digitization, it collaborates with the
AIESEC - Pune	Collaboration for student internships	AIESEC offers a chance to experience international internships for Indian students in countries like Egypt, Bahrain and more.



ORGANIZATION	NATURE OF LINKAGE/ COLLABORATION	BRIEF ABOUT ORGANIZATION
Kusum Life Sciences, Hingoli	For consultancy	Kusum Life Science, founded in 2020, is a leading Preclinical Contract Research Organization offering high-quality services in Preclinical, Pharmacology, and Analytical testing. Their state-of-the-art facility caters to diverse industries, providing Toxicology, Pharmacology, and Pharmacopoeia testing services.
Brainsmaart Solutions	Providing career guidance and generating internship opportunities to students. Providing leadership and training to staff.	Training is provided in a holistic manner that empowers the youth to make an impact in society by transcending from personal aspirations to being a contributor to Society.
Minimac systems Pvt. Ltd.	Collaboration for skill development/ enhancement of students and faculty development programmes	Founded in 2012, Minimac Systems Pvt Ltd. is a prominent technical consultant, trainer, and service provider, specializing in End-to-end Lubrication Reliability Solutions. Registered as an MSME under NSIC, the company offers solutions like the Efficient Reliability Programme and TPM. Minimac provides standardised and customised global solutions for Oil Purification, Filtration, and Flushing Systems, OEM filter replacements, Oil Testing devices, and Minimac Operations & Maintenance Services (MOMS) for various oil types. Minimac's mission and vision are strongly aligned with Clean Tech and ESG sustainability principles, serving as key drivers for sectoral growth.

### Institutional Memberships

In today's dynamic and interconnected academic landscape, institutional memberships have emerged as invaluable assets for universities. These affiliations offer a multitude of advantages that elevate the institution's stature and impact. The following institutional memberships are an investment in our university's growth and excellence:

FICCI	Membership	Established in 1927, the Federation of Indian Chambers of Commerce and Industry (FICCI) is the oldest, largest and the apex business chamber in India. Our history is closely interwoven with India's independence struggle and now with her emergence as one of the most rapidly growing economies globally.
ASSOCHAM	Membership	The Associated Chambers of Commerce and Industry of India is a non-governmental trade association and advocacy group based in New Delhi, India. The organisation represents the interests of trade and commerce in India, and acts as an interface between issues and initiatives.
ADI	Membership	Association of Designers of India (ADI) vision is to be a world class network representing professional interests of Indian Design community, creating a meaningful interface between design professionals, people as users, the industry, education institutions and the policy makers.
MCCIA	Membership	Mahratta Chamber of Commerce, Industries and Agriculture continuously strives to promote Pune as a premier investment destination as well as a major global source of quality products and services. MCCIA has been instrumental in setting up and bringing to Pune several institutions important for business.
CII-Yi	Student Chapter	Confederation of Indian Industry-Young Indians (CII-Yi) engage students in various initiatives that the students conceptualize, and execute. In tune with the Yuva vision to influence inspire and motivate millions of students across the country, Yi is working with Vishwakarma University by forming a Yi Yuva chapter at VU
NHRDN	Membership	Established over 30 years ago, National human resource development NHRDN is an autonomous, not-for-profit professionally managed organization, playing a catalyst role in grooming leaders for tomorrow.
TSSC	Membership	Telecom Sector Skill Council (TSSC) is a Non-Profit Organization, registered under the Societies Registration Act, 1860. It is an industry-led apex body, jointly set up by the Cellular Operators Association of India (COAI), Indian Cellular and Electronics Association (ICEA) and National Skill Development Corporation (NSDC), to ensure adequate availability of skilled manpower to boost growth and productivity in the Telecom sector.
APTI -	Membership	Association Of Pharmaceutical Teachers of India (APTI) - an association found by the pioneers of Pharmacy education in India in 1966 by leading personalities like Prof. M. L. Schroff, Prof. G. P Srivastava and others, has come a long way in creating better intercommunication and promotion of excellence in pharmacy education.
IPA	Membership	Indian Pharmaceutical Association (IPA) is a non-governmental organization National body representing over 1 million pharmacists and pharmaceutical scientists from Industry, Academia, Regulatory, Hospital and Community Pharmacy and work to meet the India's health care needs.

## Maximising Human Potential through Research

Vishwakarma University stands as a beacon of academic excellence, driven by a profound commitment to advancing research that not only contributes to the greater good but also respects and preserves our natural environment. This institution has made it a primary goal to conduct multi-disciplinary transformational research that directly addresses the pressing needs of society. It operates under the overarching vision of “Maximizing Human Potential,” which serves as its guiding light in all research endeavors.

The university places a strong emphasis on laying the foundation for achieving this vision. High-quality research is at the core of its mission, as it recognizes that this is the cornerstone for creating meaningful applications that can truly benefit society. In the quest to meet these societal needs, Vishwakarma University has embraced a broad range of research areas, a testament to the diversity and expertise of its faculty members who hail from various academic disciplines.

Understanding that research doesn't exist in isolation, the institution has also expanded its horizons to encompass technological and social innovations. Beyond traditional research and development activities, it strives to foster an environment where innovation thrives. This holistic approach enables the university to adapt to the dynamic nature of societal needs.

Central to all these efforts is the university's commitment to instilling a robust research culture within its academic community and beyond. This culture is not confined to its faculty alone but extends to all stakeholders, including students, administrative staff, and the broader community. By nurturing a research-centric ethos, Vishwakarma University ensures that its impact on society goes beyond the confines of its campus.

<https://research.vupune.ac.in/ourresearchers>

## Key Initiatives to Strengthen the Research Culture

- Director Research and Director Innovation, IPR & Entrepreneurship have been appointed for policy-making and initiating various R&D-related activities.
- To percolate the policies and vision related to research, the Vice-Chancellor nominates members from every faculty in the Research Initiative Cell and the IPR & Entrepreneurship Cell.
- For faculty development, efforts such as deputing faculty for internships in industry, deputation for collaborative research, encouragement to pursue a doctorate, facilitation of knowledge creation, training, and organisation of faculty competitions are undertaken regularly.
- Based on individual expertise, every faculty is encouraged to generate funds through consultancy/ research projects/training/patents.
- To bring out the students' research potential, the University is doing significant innovations in the Teaching-Learning process such as project-centric learning, student conferences, technical activities, and semester-long internships in industry or research organisations.
- The University has established Centres of Excellence (COE) in identified thrust areas by collaborating with International Universities and Industries.

<https://research.vupune.ac.in/index>

## Research Support

Vishwakarma University (VU) is firmly dedicated to nurturing a vibrant research culture by instilling a sense of research aptitude among all its stakeholders, which includes, but is not limited to, faculty members, researchers, students, and other university employees. To realize this commitment, VU has

put in place various supportive initiatives, with its guiding vision of “Maximising Human Potential” providing the foundation for high-quality research endeavors. One of the key initiatives undertaken by VU is to provide financial support and assistance to those involved in research, spanning faculty members, researchers, students, and other staff members, whether they are engaged in in-house research projects or in the preparation and submission of research proposals to both government and non-government organizations. Furthermore, VU actively encourages young faculty, staff, and other employees to embark on their research journeys by offering valuable support in the form of Research Grants.

The following policies have been framed for the facilitation of faculties:

### **1. Seed Money and Research Grant Policy**

The University provides Seed Money required for generating preliminary results and ‘Proof of Concept’ for the shortlisted research proposals, which can then be submitted to Government and Non-Governmental organisations for further funding. The Policy has been instituted to support faculty members, staff, researchers, students, and other employees of the University undertaking in-house projects by providing financial assistance, thereby encouraging them to pursue high-quality research.

<https://research.vupune.ac.in/downloads/VUSeedMoneyandResearchGrantPolicy.pdf>

### **2. Research Mobilization Policy**

The University has set up a Research & Development Fund (R & D Fund) to take care of research activities that include but is not limited to:

- I. Fees for research publications in conferences and/or journals
- II. Expenses incurred on travelling, accommodation, and food during Conferences, Paper Presentations and/or Field Activities
- III. Expenses incurred by stakeholders attending Training, Workshops, Seminars and Short-term Training Programmes (STTP)

The funds would be raised by contributions from consultancy projects and overhead charges sanctioned in research projects offered by the Government and Non-Governmental organisations.

<https://research.vupune.ac.in/downloads/VUResearchMobilizationPolicy.pdf>

### **3. Research Promotion Policy**

The University provides financial assistance to all the stakeholders, including but not limited to faculty members, researchers, students, and other employees for undertaking various initiatives, including but not limited to:

- I. Faculty Deputation for Training, Workshops, Seminars and Short-term Training Programmes (STTP)
- II. Financial Support for Publication
- III. Mobilisation of Resources

<https://research.vupune.ac.in/downloads/VUResearchPromotionPolicy.pdf>

### **4. Consultancy Policy**

The consultancy Policy provides a framework for enabling the faculty and staff of Vishwakarma University to engage in consultancy assignments. The policy provides guidelines for distributing the consultancy amount received after deducting all the expenses.

<https://research.vupune.ac.in/downloads/Consultancy-Policy.pdf>

### Research Publications of 2022

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
A Deep Multimodal Adversarial Cycle-Consistent Network for Smart Enterprise System	IEEE Transactions on Industrial Informatics	<a href="https://ieeexplore.ieee.org/document/9852313">https://ieeexplore.ieee.org/document/9852313</a>
A Comparative Study of Quercetin-Loaded Nanocochleates and Liposomes: Formulation, Characterization, Assessment of Degradation and In Vitro Anticancer Potential Deep learning approach for analysis and characterization of COVID-19	Pharmaceutics	<a href="https://www.mdpi.com/1999-4923/14/8/1601">https://www.mdpi.com/1999-4923/14/8/1601</a>
Dataset of Stagnant Water and Wet Surface Label Images for Detection	Data in Brief	<a href="https://www.sciencedirect.com/science/article/pii/S2352340921010271">https://www.sciencedirect.com/science/article/pii/S2352340921010271</a>
Dataset of Indian and Thai banknotes with annotations	Data in brief	<a href="https://www.sciencedirect.com/science/article/pii/S2352340922002189">https://www.sciencedirect.com/science/article/pii/S2352340922002189</a>
Secure watermarking scheme for color DICOM images in telemedicine applications	Computers, Materials and Continua	<a href="https://file.techscience.com/ueditor/files/cmc/TSP_CMC_70-2/TSP_CMC_19302/TSP_CMC_19302.pdf">https://file.techscience.com/ueditor/files/cmc/TSP_CMC_70-2/TSP_CMC_19302/TSP_CMC_19302.pdf</a>
JMA: Nature-Inspired Java Macaque Algorithm for Optimization Problem	Mathematics	<a href="https://www.mdpi.com/2227-7390/10/5/688/htm">https://www.mdpi.com/2227-7390/10/5/688/htm</a>
IMG forensics: Multimedia enabled information hiding investigation using convolutional neural network	IET Image Processing	<a href="https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/ipr2.12272">https://ietresearch.onlinelibrary.wiley.com/doi/full/10.1049/ipr2.12272</a>
An Optimized Load Balancing Using Firefly Algorithm in Flying Ad-Hoc Network	Electronics	<a href="https://www.mdpi.com/2079-9292/11/2/252">https://www.mdpi.com/2079-9292/11/2/252</a>
Energy-Efficient Hybrid Power System Model Based on Solar and Wind Energy for Integrated Grids	Mathematical Problems in Engineering	<a href="https://www.hindawi.com/journals/mpe/2022/4877422/">https://www.hindawi.com/journals/mpe/2022/4877422/</a>
Ai-enabled radiologist in the loop: novel ai-based framework to augment radiologist performance for covid-19 chest ct medical image annotation and classification from pneumonia	Neural Computing and Applications	<a href="https://link.springer.com/article/10.1007/s00521-022-07055-1">https://link.springer.com/article/10.1007/s00521-022-07055-1</a>
Cardiac Diagnosis with Machine Learning: A Paradigm Shift in Cardiac Care	Applied Artificial Intelligence	<a href="https://www.tandfonline.com/doi/full/10.1080/08839514.2022.2031816">https://www.tandfonline.com/doi/full/10.1080/08839514.2022.2031816</a>

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
Computer aided deep learning model for identification of lymphoblast cell using microscopic leukocyte images	Expert Systems	<a href="https://onlinelibrary.wiley.com/doi/abs/10.1111/exsy.12894">https://onlinelibrary.wiley.com/doi/abs/10.1111/exsy.12894</a>
FruitNet: Indian fruits image dataset with quality for machine learning applications	Data in Brief	<a href="https://www.sciencedirect.com/science/article/pii/S2352340921009616">https://www.sciencedirect.com/science/article/pii/S2352340921009616</a>
Dataset of road surface images with seasons for machine learning applications	Data in brief	<a href="https://www.sciencedirect.com/science/article/pii/S2352340922002347">https://www.sciencedirect.com/science/article/pii/S2352340922002347</a>
A cost-effective solution for non-convex economic load dispatch problems in power systems using slime mould algorithm	Sustainability	<a href="https://www.mdpi.com/2071-1050/14/5/2586">https://www.mdpi.com/2071-1050/14/5/2586</a>
An Optimized Load Balancing Using Firefly Algorithm in Flying Ad-Hoc Network	Electronics	<a href="https://www.mdpi.com/2079-9292/11/2/252">https://www.mdpi.com/2079-9292/11/2/252</a>
Design and analysis of motion and energy regulating vibration harvester	Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science	<a href="https://journals.sagepub.com/doi/abs/10.1177/09544062211021441">https://journals.sagepub.com/doi/abs/10.1177/09544062211021441</a>
India's water health: region-wise water quality assessment of treated and untreated water	Sustainable Water Resources Management	<a href="https://link.springer.com/article/10.1007/s40899-022-00610-7">https://link.springer.com/article/10.1007/s40899-022-00610-7</a>
[HDBU][HSO4]-catalyzed facile synthesis of new 1, 2, 3-triazole-tethered 2, 3-dihydroquinazolin-4 [1H]-one derivatives and their DPPH radical scavenging activity	Research on Chemical Intermediates	<a href="https://link.springer.com/article/10.1007/s11164-021-04639-9">https://link.springer.com/article/10.1007/s11164-021-04639-9</a>
Synthesis, biological evaluation and molecular docking studies of quinoline conjugated 1, 2, 3 triazole derivatives as antileishmanial agents	Journal of Heterocyclic Chemistry	<a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/jhet.4414">https://onlinelibrary.wiley.com/doi/abs/10.1002/jhet.4414</a>
Microwave-assisted organic synthesis, antimycobacterial activity, structure–activity relationship and molecular docking studies of some novel indole-oxadiazole hybrids	SAR and QSAR in Environmental Research	<a href="https://pubmed.ncbi.nlm.nih.gov/35102805/">https://pubmed.ncbi.nlm.nih.gov/35102805/</a>
Synthesis, biological evaluation, and molecular docking study of thiophene , piperazine , and thiazolidinone based hybrids as potential antimicrobial agents	Journal of Heterocyclic Chemistry	<a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/jhet.4366">https://onlinelibrary.wiley.com/doi/abs/10.1002/jhet.4366</a>
Conventional and microwave assisted organic synthesis of novel antimycobacterial agents bearing furan and pyridine hybrids	Drug Development Research	<a href="https://pubmed.ncbi.nlm.nih.gov/34414591/">https://pubmed.ncbi.nlm.nih.gov/34414591/</a>

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
Design, Synthesis and Biological Evaluation of Novel Furan & Thiophene Containing Pyrazolyl Pyrazolines as Antimalarial Agents	Polycyclic Aromatic Compounds	<a href="https://www.sciencedirect.com/org/science/article/abs/pii/S1040663822004195">https://www.sciencedirect.com/org/science/article/abs/pii/S1040663822004195</a>
Two antibacterial spiro compounds from the roots of Artemisia pallens wall: evidence from molecular docking	Natural Product Research	<a href="https://pubmed.ncbi.nlm.nih.gov/33749414/">https://pubmed.ncbi.nlm.nih.gov/33749414/</a>
Synthesis of Novel Hydrazones of Levofloxacin Related Molecule and their In Vitro evaluation as antioxidant, and Molecular Docking Studies	Combinatorial Chemistry & High Throughput Screening	<a href="https://pubmed.ncbi.nlm.nih.gov/33372867/">https://pubmed.ncbi.nlm.nih.gov/33372867/</a>
Tetrazoloquinoline-1, 2, 3-triazole derivatives as antimicrobial agents: synthesis, biological evaluation and molecular docking study	Polycyclic Aromatic Compounds	<a href="https://www.tandfonline.com/doi/abs/10.1080/10406638.2020.1821229">https://www.tandfonline.com/doi/abs/10.1080/10406638.2020.1821229</a>
Smartphone sensor dataset for driver behavior analysis	Data in Brief	<a href="https://www.sciencedirect.com/science/article/pii/S2352340922002037">https://www.sciencedirect.com/science/article/pii/S2352340922002037</a>
Course complexity in engineering education using E-learner's affective-state prediction	Kybernetes	<a href="https://www.emerald.com/insight/content/doi/10.1108/K-09-2021-0806/full/html">https://www.emerald.com/insight/content/doi/10.1108/K-09-2021-0806/full/html</a>
Majority Voting and Feature Selection Based Network Intrusion Detection System	EAI Endorsed Transaction on Scalable Information Systems	<a href="https://publications.eai.eu/index.php/sis/article/view/350">https://publications.eai.eu/index.php/sis/article/view/350</a>
Learning to Detect Phishing Web Pages Using Lexical and String Complexity Analysis	EAI Endorsed Transactions on Scalable Information Systems	<a href="https://publications.eai.eu/index.php/sis/article/view/518">https://publications.eai.eu/index.php/sis/article/view/518</a>
MHD slip flow and heat transfer of UCM fluid with the effect of suction/injection due to stretching sheet: OHAM solution	Heat Transfer	<a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/htj.22444">https://onlinelibrary.wiley.com/doi/abs/10.1002/htj.22444</a>
Analysis of the change in bugginess and adaptiveness of python software systems	Multimedia Tools and Applications	<a href="https://link.springer.com/article/10.1007/s11042-022-13246-8">https://link.springer.com/article/10.1007/s11042-022-13246-8</a>
Effects of thermophoresis and Brownian motion for thermal and chemically reacting Casson nanofluid flow over a linearly stretching sheet	Results in Engineering	<a href="https://www.sciencedirect.com/science/article/pii/S2590123022001189">https://www.sciencedirect.com/science/article/pii/S2590123022001189</a>
Effects of the Magnetohydrodynamic Flow within the Boundary Layer of a Jeffery Fluid in a Porous Medium over a Shrinking/Stretching Sheet	Mathematical Problems in Engineering	<a href="https://www.hindawi.com/journals/mpe/2022/7326504/">https://www.hindawi.com/journals/mpe/2022/7326504/</a>

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
The effects of MHD radiating and non-uniform heat source/sink with heating on the momentum and heat transfer of Eyring-Powell fluid over a stretching	Results in Engineering	<a href="https://www.sciencedirect.com/science/article/pii/S2590123022001050">https://www.sciencedirect.com/science/article/pii/S2590123022001050</a>
A novel deep learning based single shot multibox detector model for object detection in optical remote sensing images	Geoscience Data Journal	<a href="https://rmetsonline.wiley.com/doi/10.1002/gdj3.162?af=R">https://rmetsonline.wiley.com/doi/10.1002/gdj3.162?af=R</a>
Hybrid Spatiotemporal Contrastive Representation Learning for Content-Based Surgical Video Retrieval	Electronics	<a href="https://www.mdpi.com/2079-9292/11/9/1353">https://www.mdpi.com/2079-9292/11/9/1353</a>
An Optimization-Based Diabetes Prediction Model Using CNN and Bi-Directional LSTM in Real-Time Environment	Applied Sciences	<a href="https://www.mdpi.com/2076-3417/12/8/3989">https://www.mdpi.com/2076-3417/12/8/3989</a>
Dual Battery Storage Technique for Remote, Location-Based Solar PV System and Standalone Applications	Energies	<a href="https://www.mdpi.com/1996-1073/15/8/2748">https://www.mdpi.com/1996-1073/15/8/2748</a>
Green-Tech CAV: Next Generation Computing for Traffic Sign and Obstacle Detection in Connected and Autonomous Vehicles	IEEE Transactions on Green Communications and Networking	<a href="https://ieeexplore.ieee.org/document/9743566">https://ieeexplore.ieee.org/document/9743566</a>
A Cost-Effective Solution for Non-Convex Economic Load Dispatch Problems in Power Systems Using Slime Mould Algorithm	Sustainability	<a href="https://www.mdpi.com/2071-1050/14/5/2586">https://www.mdpi.com/2071-1050/14/5/2586</a>
A drone-based data management and optimization using metaheuristic algorithms and blockchain smart contracts in a secure fog environment	Computers and Electrical Engineering	<a href="https://www.sciencedirect.com/science/article/abs/pii/S0045790622004700">https://www.sciencedirect.com/science/article/abs/pii/S0045790622004700</a>
Automatic Vehicle Identification and Classification Model Using the YOLOv3 Algorithm for a Toll Management System	Sustainability	<a href="https://ideas.repec.org/a/gam/jsusta/v14y2022i15p9163-d872271.html">https://ideas.repec.org/a/gam/jsusta/v14y2022i15p9163-d872271.html</a>
An Efficient Machine Learning-Based Feature Optimization Model for the Detection of Dyslexia	Computational Intelligence and Neuroscience	<a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9288336/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9288336/</a>
A Comparative Study of Quercetin-Loaded Nanocochleates and Liposomes: Formulation, Characterization, Assessment of Degradation and In Vitro Anticancer Potential	Pharmaceutics	<a href="https://www.mdpi.com/1999-4923/14/8/1601">https://www.mdpi.com/1999-4923/14/8/1601</a>
Encapsulation of Lactic Acid Bacteria by Lyophilisation with Its Effects on Viability and Adhesion Properties	Evidence-Based Complementary and Alternative Medicine	<a href="https://www.hindawi.com/journals/ecam/2022/4651194/">https://www.hindawi.com/journals/ecam/2022/4651194/</a>



TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
Functional Thermoresponsive Hydrogel Molecule to Material Design for Biomedical Applications	Polymers	<a href="https://www.mdpi.com/2073-4360/14/15/3126">https://www.mdpi.com/2073-4360/14/15/3126</a>
Manufacturing of Pure Iron by Cold Rolling and Investigation for Application in Magnetic Flux Shielding	Materials	<a href="https://pubmed.ncbi.nlm.nih.gov/35407962/">https://pubmed.ncbi.nlm.nih.gov/35407962/</a>
Dataset of Vector Mosquito Images	Data in Brief	<a href="https://www.sciencedirect.com/science/article/pii/S2352340922007806">https://www.sciencedirect.com/science/article/pii/S2352340922007806</a>
Design, Synthesis and Bioevaluation of Highly Functionalized 1,2,3-Triazole-Guanidine Conjugates as Anti-Inflammatory and Antioxidant Agents	Polycyclic Aromatic Compounds	<a href="https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2105904?src=8&amp;journalCode=gpol20">https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2105904?src=8&amp;journalCode=gpol20</a>
Synthesis of N-Methylene Linker Containing Phthalimide Bearing-1H-1,2,3-Triazole by Click Chemistry Approach: Anticancer Activity in Human Cells	Polycyclic Aromatic Compounds	<a href="https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2101487">https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2101487</a>
Synthesis of fluoro-rich pyrimidine-5-carbonitriles as antitubercular agents against H37Rv receptor	Heterocyclic Communications	<a href="https://www.degruyter.com/document/doi/10.1515/hc-2022-0010/html?lang=en">https://www.degruyter.com/document/doi/10.1515/hc-2022-0010/html?lang=en</a>
New 1,2,3 Triazole Tethered Thiazolidinedione Derivatives: Synthesis, Bioevaluation and Molecular Docking Study	Polycyclic Aromatic Compounds	<a href="https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2069132?journalCode=gpol20">https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2069132?journalCode=gpol20</a>
DTP/SiO <sub>2</sub> Assisted Synthesis of New Benzimidazole-Thiazole Conjugates Targeting Antitubercular and Antioxidant Activities	Polycyclic Aromatic Compounds	<a href="https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2056210?journalCode=gpol20">https://www.tandfonline.com/doi/abs/10.1080/10406638.2022.2056210?journalCode=gpol20</a>
AI-federated novel delay-aware link-scheduling for Industry 4.0 applications in IoT networks	International Journal of Pervasive Computing and Communications	<a href="https://www.emerald.com/insight/content/doi/10.1108/IJPCC-12-2021-0297/full/html">https://www.emerald.com/insight/content/doi/10.1108/IJPCC-12-2021-0297/full/html</a>
The Impact of Globalization and Economic Growth of Dhokra ART-Chhattisgarh-India	ECS Transactions	<a href="https://iopscience.iop.org/article/10.1149/10701.6261ecst">https://iopscience.iop.org/article/10.1149/10701.6261ecst</a>
Synthesis, Biological Activity, and Computational Study of 1-[5-(4-Methylthiazol-5-yl)-2-phenyl-1,3,4-oxadiazol-3(2H)-yl] ethanone Derivatives	Russian Journal of General Chemistry	<a href="https://link.springer.com/article/10.1134/S1070363222080199">https://link.springer.com/article/10.1134/S1070363222080199</a>
Oxadiazole: A highly versatile scaffold in drug discovery	Archiv der Pharmazie	<a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/ardp.202200123">https://onlinelibrary.wiley.com/doi/abs/10.1002/ardp.202200123</a>
Significance of animal experimentation in biomedical research in the current era: Narrative review	Journal of Applied Pharmaceutical Science	<a href="https://japsonline.com/abstract.php?article_id=3696&amp;sts=2">https://japsonline.com/abstract.php?article_id=3696&amp;sts=2</a>

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
Synthesis, Characterization, In vitro Antimicrobial Evaluation and Molecular Docking Studies of Pyrazole Based Pyrimidine and Pyrazolone Motifs	Anti-Infective Agents	<a href="https://www.eurekaselect.com/article/124529">https://www.eurekaselect.com/article/124529</a>
[DBU][OAc]-mediated synthesis and anthelmintic activity of triazole-tetrazole conjugates	Research on Chemical Intermediates	<a href="https://link.springer.com/article/10.1007/s11164-022-04842-2">https://link.springer.com/article/10.1007/s11164-022-04842-2</a>
Design, synthesis of anticancer and anti-inflammatory 4-(1-methyl-1H-indol-3-yl)-6-(methylthio) pyrimidine-5-carbonitriles	Synthetic Communications	<a href="https://www.tandfonline.com/doi/abs/10.1080/00397911.2022.2048860">https://www.tandfonline.com/doi/abs/10.1080/00397911.2022.2048860</a>
Synthesis and Biological Evaluation of 2-(4,5,6,7-Tetrahydrobenzo[c]Isoxazol-3-yl)-4H-Chromen-4-Ones	Polycyclic Aromatic Compounds	<a href="https://www.tandfonline.com/doi/abs/10.1080/10406638.2021.1982733">https://www.tandfonline.com/doi/abs/10.1080/10406638.2021.1982733</a>
Design, synthesis, antimicrobial activity and in silico molecular docking studies of some sulfur containing pyrazole-pyridine hybrids	Phosphorus, Sulfur, and Silicon and the Related Elements	<a href="https://www.sciencedirect.com/org/science/article/abs/pii/S104265072201262X">https://www.sciencedirect.com/org/science/article/abs/pii/S104265072201262X</a>
Characterization of Topp-Leone Lomax Distribution based on the Generalized Lower Record Values.	Journal of Statistics Applications and Probability	<a href="https://www.naturalspublishing.com/Article.asp?ArtclD=25527">https://www.naturalspublishing.com/Article.asp?ArtclD=25527</a>
Effects Of Music Listening on Coping Strategies and Multiple Intelligence in Music-Experienced and Music-Nonexperience Adolescents	Journal of Positive School Psychology	<a href="https://journalppw.com/index.php/jpsp/article/view/8107/5272">https://journalppw.com/index.php/jpsp/article/view/8107/5272</a>
Tourism and Yoga: A Phenomenological Analysis with Reference to Select Places in India.	Journal of Positive School Psychology	<a href="https://journalppw.com/index.php/jpsp/article/view/1576">https://journalppw.com/index.php/jpsp/article/view/1576</a>
Effect Of Binaural Beats Music Therapy On Anxiety Via Eeg Using Ann & Machine Learning – A Survey	Journal of Theoretical and Applied Information Technology	<a href="http://www.jatit.org/volumes/Vol100No3/5Vol100No3.pdf">http://www.jatit.org/volumes/Vol100No3/5Vol100No3.pdf</a>
Solving Invastigative Jurisdictional Problem Through Data Localisation	Journal of Harbin Institute of Technology	<a href="http://hebgydxxb.periodicales.com/index.php/JHIT/article/view/908">http://hebgydxxb.periodicales.com/index.php/JHIT/article/view/908</a>
Music Engagement and performance on Gardner's Intelligence Scale among Adolescents	Journal of Positive School Psychology	<a href="https://www.journalppw.com/index.php/jpsp/article/view/2019">https://www.journalppw.com/index.php/jpsp/article/view/2019</a>
A Flexible Mechanism Based Vibration Isolator for Machine Tool Application	MATEC Web of Conferences	<a href="https://www.matec-conferences.org/articles/mateconf/abs/2022/04/mateconf_mms2020_03008/mateconf_mms2020_03008.html">https://www.matec-conferences.org/articles/mateconf/abs/2022/04/mateconf_mms2020_03008/mateconf_mms2020_03008.html</a>
Weighted Amarendra Distribution: Properties and Applications to to Model Real-Life Data	Journal of Statistics Applications & Probability	

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Impact of Aesthetics in Innovative Product Development on Consumer Perception and Acceptance	ECS Transactions	<a href="https://iopscience.iop.org/article/10.1149/10701.9915ecst/meta">https://iopscience.iop.org/article/10.1149/10701.9915ecst/meta</a>
A Study on Consumer Buying Pattern on Retail Stores: A Literature Review	International Journal of Health Sciences	<a href="https://www.neliti.com/publications/430435/a-study-on-consumer-buying-pattern-on-retail-stores-a-literature-review">https://www.neliti.com/publications/430435/a-study-on-consumer-buying-pattern-on-retail-stores-a-literature-review</a>
Design, synthesis, antimicrobial evaluation, and in silico studies of some 4 thiazolidinone hybrids bearing coumarin and pyridine moieties	Journal of Heterocyclic chemistry	<a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/jhet.4550">https://onlinelibrary.wiley.com/doi/abs/10.1002/jhet.4550</a>
A Step-By-Step Synthesis of S-Methylene Linker Containing Triazole-Benzoxazole Hybrids by Click Chemistry Approach: Anticancer Activity in Human Cells	Analytical Chemistry Letters	<a href="https://www.tandfonline.com/doi/abs/10.1080/22297928.2021.1894604">https://www.tandfonline.com/doi/abs/10.1080/22297928.2021.1894604</a>
Synthesis, Characterization & Molecular Docking Study of Hydrazinylthiazole Derivatives as Antibacterial Agents, Analytical Chemistry Letters	Analytical Chemistry Letters	<a href="https://www.tandfonline.com/doi/abs/10.1080/22297928.2021.1983873">https://www.tandfonline.com/doi/abs/10.1080/22297928.2021.1983873</a>
Investigation of the Anti-inflammatory potential of Mono-carbonyl Analogues of Curcumin	Analytical Chemistry Letters	<a href="https://www.tandfonline.com/doi/abs/10.1080/22297928.2022.2132877">https://www.tandfonline.com/doi/abs/10.1080/22297928.2022.2132877</a>
Design, Synthesis, Antimicrobial Activity and Molecular docking Studies of Pyridine Based Thiazolidine-4-one and Its 5-Arylidene Derivatives	Analytical Chemistry Letters	<a href="https://www.tandfonline.com/doi/abs/10.1080/22297928.2022.2148558">https://www.tandfonline.com/doi/abs/10.1080/22297928.2022.2148558</a>
A Study Of Perceptions Of Passengers About In-Flight Entertainment Services	Journal of the Maharaja Sayajirao University of Baroda	-
To Study The Benefits Of Social Media Pages For Enhancing Tourism By Using Content Analysis: A Case Study Of Bati (Backpackers And Travellers Of India) Page On Facebook	Dogo Rangsang Research Journal	-
Role Of DCCB'S In Doubling Farmers Income A Case Study Of Satara District Cooperative Bank	Journal of Fundamental and Comparative Research, ShodhSamhita	<a href="https://research.vupune.ac.in/2022">https://research.vupune.ac.in/2022</a>
Are We Heading Towards Sustainable Breathing In Pune City?	Journal of Fundamental & Comparative Research, ShodhSamhita	<a href="https://research.vupune.ac.in/2022">https://research.vupune.ac.in/2022</a>
The Role of Alternate Nostril Breathing (Anuloma Viloma) Technique in Regulation of Blood Pressure	Asian Pacific Journal of Health Sciences	<a href="https://apjhs.com/index.php/apjhs/article/view/2079">https://apjhs.com/index.php/apjhs/article/view/2079</a>
Study Of Social Media Use Among The Selected States Of India	Dogo Rangsang Research Journal	-

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To study the benefits of social media pages for enhancing tourism by using content analysis:A case study of BATI(Backpackers and Travellers India)page on Facebook	Dogo Rangsang Research Journal	
Sustainability and Role of Advertising Design	Rabindra Bharati Journal Of Philosophy	
Undoped and Doped Carbon Nanotubes for Remediation of Contaminants from Wastewater	Carbon Nanotubes for a Green Environment	
Carbon Nanotubes For Biomedical Applications	Carbon Nanotubes for a Green Environment	
Expert Systems in Behavioral and Mental Healthcare: Applications of AI in Decision Making and Consultancy	Big Data Analytics and Machine Intelligence in Biomedical and Health Informatics: Concepts, Methodologies, Tools and Applications	<a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119792376.ch6">https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119792376.ch6</a>
User Interface Design With Data Visualization Technique: Case Study of the COVID-19 Pandemic in India	Designing User Interfaces With a Data Science Approach Data Intelligence and Cognitive Informatics	<a href="https://www.igi-global.com/chapter/user-interface-design-with-data-visualization-technique/299755">https://www.igi-global.com/chapter/user-interface-design-with-data-visualization-technique/299755</a>
Blockchain Technology: Revolution from a Centralized to Distributed Systems		<a href="https://link.springer.com/chapter/10.1007/978-981-16-6460-1_45">https://link.springer.com/chapter/10.1007/978-981-16-6460-1_45</a>
Innovations in Green Nanoscience and Nanotechnology : Synthesis, Characterization and Applications		<a href="https://www.taylorfrancis.com/books/edit/10.1201/9781003319153/innovations-green-nanoscience-nanotechnology-shrikaant-kulkarni">https://www.taylorfrancis.com/books/edit/10.1201/9781003319153/innovations-green-nanoscience-nanotechnology-shrikaant-kulkarni</a>
Expert Systems in Behavioral and Mental Healthcare: Applications of AI in Decision-Making and Consultancy		<a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119792376.ch6">https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119792376.ch6</a>
Performance Comparison of Imputation Methods for Heart Disease Prediction	Artificial Intelligence for Innovative Healthcare Informatics	<a href="https://link.springer.com/chapter/10.1007/978-3-030-96569-3_11">https://link.springer.com/chapter/10.1007/978-3-030-96569-3_11</a>
Preparation of biological micro powder based epoxy composite with improved damping factor and investigation for application in a MEMS sensor packaging	2022 3rd International Conference on Intelligent Engineering and Management (ICIEM)	<a href="https://ieeexplore.ieee.org/document/9853069">https://ieeexplore.ieee.org/document/9853069</a>
Torsional Tuned Mass Damper System Parameter Identification with Experimental Method	2022 3rd International Conference on Intelligent Engineering & Management (ICIEM)	<a href="https://ieeexplore.ieee.org/document/9853142">https://ieeexplore.ieee.org/document/9853142</a>

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
Impact of Covid'19 on Indian Stock Prediction by Technical Indicators	2022 International Conference for Advancement in Technology (ICONAT)	<a href="https://ieeexplore.ieee.org/document/9726066">https://ieeexplore.ieee.org/document/9726066</a>
Digital Learning: A Survival Strategy to Unlock Opportunity	Available at SSRN 4027464	<a href="https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4027464">https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4027464</a>
Development of favipiravir loaded PLGA nanoparticles entrapped in in-situ gel for treatment of Covid-19 via nasal route	Journal of Drug Delivery Science and Technology	<a href="https://www.sciencedirect.com/science/article/pii/S1773224722009935?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S1773224722009935?via%3Dihub</a>
Innovations in Green Nanoscience and Nanotechnology Synthesis, Characterization, and Applications	Innovations in Green Nanoscience and Nanotechnology Synthesis, Characterization, and Applications	<a href="https://www.taylorfrancis.com/books/edit/10.1201/9781003319153/innovations-green-nanoscience-nanotechnology-shrikaant-kulkarni">https://www.taylorfrancis.com/books/edit/10.1201/9781003319153/innovations-green-nanoscience-nanotechnology-shrikaant-kulkarni</a>
Globalization and Warli Tribal Art	International Journal of Research Granthaalayah	<a href="http://granthaalayah.com/Articles/Vol7Iss11SE/21_IJRG19_ARTS11_21.pdf">http://granthaalayah.com/Articles/Vol7Iss11SE/21_IJRG19_ARTS11_21.pdf</a>
Globalization and its effects on the Warli art	AGE Journal of Social Inclusion Studies Editorial Office	<a href="https://journals.sagepub.com/doi/10.1177/2394481119901072">https://journals.sagepub.com/doi/10.1177/2394481119901072</a>
Fundamental Principle And Applications Of Iontophoresis In Contemporary Advancement Of Drug Delivery System: A Critical Appraisal	International Journal Of Pharmaceutical Sciences And Research	<a href="https://ijpsr.com/bft-article/fundamental-principle-and-applications-of-iontophoresis-in-contemporary-advancement-of-drug-delivery-system-a-critical-appraisal/?view=fulltext">https://ijpsr.com/bft-article/fundamental-principle-and-applications-of-iontophoresis-in-contemporary-advancement-of-drug-delivery-system-a-critical-appraisal/?view=fulltext</a>
Smart tourism: antecedents to Indian traveller's decision	European Journal of Innovation Management	<a href="https://www.emerald.com/insight/content/doi/10.1108/EJIM-06-2022-0293/full/html?skipTracking=true">https://www.emerald.com/insight/content/doi/10.1108/EJIM-06-2022-0293/full/html?skipTracking=true</a>
A Study on Effectiveness of Big Data Analytics on Organizational Growth with reference to Manufacturing Sector	NeuroQuantology	<a href="https://neuroquantology.com">https://neuroquantology.com</a>
Growth with reference to Manufacturing Sector	Journal of Information & Optimization Sciences	<a href="https://www.tandfonline.com/doi/abs/10.1080/02522667.2022.2117325">https://www.tandfonline.com/doi/abs/10.1080/02522667.2022.2117325</a>
Does Investor'S Attitude Matter? – A Study Of Investment Management By Working Women Investors	Journal of Information and Optimization Sciences	<a href="https://www.tandfonline.com/doi/abs/10.1080/02522667.2022.2125060">https://www.tandfonline.com/doi/abs/10.1080/02522667.2022.2125060</a>
A Study On Students Online Buying Behavior Influenced By Facebook Advertising With Special Reference To Colleges	Journal Of Pharmaceutical Negative Results	<a href="https://www.pnrjournal.com/index.php/home/article/view/3142">https://www.pnrjournal.com/index.php/home/article/view/3142</a>
A Study Of Perceptions Of Passengers About In-Flight Entertainment Services	Journal of the Maharaja Sayajirao University of Baroda	NA

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To Study The Benefits Of Social Media Pages For Enhancing Tourism By Using Content Analysis: A Case Study Of Bati (Backpackers And Travellers Of India) Page On Facebook	Dogo Rangsang Research Journal	-
"Role Of Dccb'S In Doubling Farmers Income	Journal of Fundamental and Comparative Research, ShodhSamhita	NA
Single Intrusion Detection System For Detection Of Multiple Ddos Attacks	Industrial Engineering Journal	<a href="http://ivyscientific.org/publication/">http://ivyscientific.org/publication/</a>
Natural Polymers-Based Nanoparticles Targeted to Solid Tumors	Environmental Chemistry for a Sustainable World	<a href="https://link.springer.com/chapter/10.1007/978-3-031-14848-4_3">https://link.springer.com/chapter/10.1007/978-3-031-14848-4_3</a>
Enhancement of Permeation Rate of Rifabutin Using Encapsulation of Lipid-Based Nanoparticles through Chicken Ileum by Statistical Optimization Approach	Pharmacy	<a href="https://www.routledge.com/Innovations-in-Green-Nanoscience-and-Nanotechnology-Synthesis-Characterization/Kulkarni/p/book/9781003319153">https://www.routledge.com/Innovations-in-Green-Nanoscience-and-Nanotechnology-Synthesis-Characterization/Kulkarni/p/book/9781003319153</a>
Whole Plant Extracts Of Mentha Arvensis Ameliorates Antidepressant Activity In Albino Mice	Pharmacy	<a href="https://ijpr.humanjournals.com/wp-content/uploads/2022/10/26-WHOLE-PLANT-EXTRACTS-OF-MENTHA-ARVENSIS-AMELIORATES-ANTIDEPRESSANT-ACTIVITY-IN-ALBINO-MICE.pdf">https://ijpr.humanjournals.com/wp-content/uploads/2022/10/26-WHOLE-PLANT-EXTRACTS-OF-MENTHA-ARVENSIS-AMELIORATES-ANTIDEPRESSANT-ACTIVITY-IN-ALBINO-MICE.pdf</a>
Use Of Social Networking Sites For Tourism Marketing : Current Scenario And Future Prospects	Travel and Tourism	<a href="https://ihmranchi.in/page-international-conference-on-travel">https://ihmranchi.in/page-international-conference-on-travel</a>
Pros And Cons Of National Education Policy 2020	Travel and Tourism	<a href="https://www.bhumipublishing.com/book/">https://www.bhumipublishing.com/book/</a>
VegNet: Dataset of vegetable quality images for machine learning applications	Data in Brief	<a href="https://www.sciencedirect.com/science/article/pii/S2352340922008629">https://www.sciencedirect.com/science/article/pii/S2352340922008629</a>
Importance of Naad yoga for reducing the stress	Naad-Nartan Journal of Dance & Music	<a href="https://www.researchgate.net/profile/Yogesh-Suryawanshi-6/publication/366325466_Importance_of_Naad_yoga_for_reducing_the_stress/links/639c4b06e42faa7e75cad6a1/Importance-of-Naad-yoga-for-reducing-the-stress.pdf">https://www.researchgate.net/profile/Yogesh-Suryawanshi-6/publication/366325466_Importance_of_Naad_yoga_for_reducing_the_stress/links/639c4b06e42faa7e75cad6a1/Importance-of-Naad-yoga-for-reducing-the-stress.pdf</a>
A study on Parenting Stress and Coping Strategies adopted among working mother	NeuroQuantology	<a href="https://www.neuroquantology.com">https://www.neuroquantology.com</a>
Jasminum elongatum Ameliorates Acetaminophen Induced Hepatotoxicity by Modulating Dysregulated Antioxidant Enzyme System	Pharmacognosy Magazine	<a href="https://journals.sagepub.com/doi/full/10.1177/09731296221137434">https://journals.sagepub.com/doi/full/10.1177/09731296221137434</a>
Artificial Intelligence Generated Inventions: can we confer Patent protection and Sue Infringing Machines?	An International Multidisciplinary Half Yearly Research Journal IDEAL	NA

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
Detection of Diabetic Retinopathy in Fundus Images Using SVM	International Journal of Scientific Research in Engineering and Management	<a href="https://ijsrem.com/download/detection-of-diabetic-retinopathy-in-fundus-images-using-svm/">https://ijsrem.com/download/detection-of-diabetic-retinopathy-in-fundus-images-using-svm/</a>
Music Generation Using Recurrent Neural Network	International Journal for Research in Applied Science & Engineering Technology	<a href="https://www.ijraset.com/research-paper/music-generation-using-recurrent-neural-networks">https://www.ijraset.com/research-paper/music-generation-using-recurrent-neural-networks</a>
Mental Health Prediction Using Machine Learning	International Research Journal of Engineering and Technology	<a href="https://www.irjet.net/archives/V9/i12/IRJET-V9I12189.pdf">https://www.irjet.net/archives/V9/i12/IRJET-V9I12189.pdf</a>
Foreign Contributions to Charitable Trusts in India: The Futuristic Approach	International Journal of Innovative Research in Technology	<a href="https://www.ijirt.org/master/publishedpaper/IJIRT154399-PAPER.pdf">https://www.ijirt.org/master/publishedpaper/IJIRT154399-PAPER.pdf</a>
Automatic Classification Of Mosquito Genera Using Transfer Learning	Journal of Theoretical and Applied Information Technology	<a href="https://research.vupune.ac.in/10.5281/zenodo.6417511">https://research.vupune.ac.in/10.5281/zenodo.6417511</a>
Cytochrome P450 from Discovery to Pandemic	International Journal of Health Sciences	<a href="https://sciencescholar.us/journal/index.php/ijhs/article/view/6880">https://sciencescholar.us/journal/index.php/ijhs/article/view/6880</a>
Prediction of Surface Hardness based on Experimentation of Single Roller Burnishing Operation	Mathematical Statistician and Engineering Applications	<a href="https://www.philstat.org/index.php/MSEA/article/view/1575/1089">https://www.philstat.org/index.php/MSEA/article/view/1575/1089</a>
Antihistaminic effects of Azadirachta indica leaves in laboratory animals	International journal of ayurvedic medicine	<a href="https://www.ijam.co.in/index.php/ijam/article/view/2559">https://www.ijam.co.in/index.php/ijam/article/view/2559</a>
Pilot study on renovation, modernization and uprating of agricultural dependent power plant	Materials Today: Proceedings	<a href="https://doi.org/10.1016/j.matpr.2022.09.472">https://doi.org/10.1016/j.matpr.2022.09.472</a>
Enhancement Of Solubility Of Poorly Soluble Drug Lansoprazole	International Journal of Applied Pharmaceutics	<a href="https://journals.innovareacademics.in/index.php/ijap/article/view/45529">https://journals.innovareacademics.in/index.php/ijap/article/view/45529</a>
Formulation, development and evaluation of chewable tablet of dicyclomine hydrochloride	International Journal of Health Sciences	<a href="https://sciencescholar.us/journal/index.php/ijhs/article/view/11430">https://sciencescholar.us/journal/index.php/ijhs/article/view/11430</a>
Breast Cancer Pathological Image Classification Based on the Multiscale CNN Squeeze Model.	Computational Intelligence and Neuroscience	<a href="https://www.hindawi.com/journals/cin/2022/7075408/">https://www.hindawi.com/journals/cin/2022/7075408/</a>
Stock prediction analysis by customers opinion in Twitter data using an optimized intelligent model	Social Network Analysis and Mining	<a href="https://link.springer.com/article/10.1007/s13278-022-00979-5">https://link.springer.com/article/10.1007/s13278-022-00979-5</a>
A Novel Approach for e-Voting System Using Blockchain	2022 3rd International Conference on Intelligent Engineering and Management (ICIEM)	<a href="https://ieeexplore.ieee.org/document/9853099">https://ieeexplore.ieee.org/document/9853099</a>

TITLE OF PAPER	NAME OF JOURNAL	LINK TO ARTICLE/PAPER / ABSTRACT OF THE ARTICLE
Survey of Detection Techniques for DDoS Attacks	2022 3rd International Conference on Intelligent Engineering and Management (ICIEM)	<a href="https://ieeexplore.ieee.org/xpl/conhome/9853009/proceeding?isnumber=9853010&amp;sortType=vol-only-seq&amp;searchWithin=Kavita">https://ieeexplore.ieee.org/xpl/conhome/9853009/proceeding?isnumber=9853010&amp;sortType=vol-only-seq&amp;searchWithin=Kavita</a>
A study Of the awareness of the financial planning and implementation amongst generation Z	Journal of Positive School Psychology	<a href="https://journalppw.com/index.php/jpsp/article/view/7569">https://journalppw.com/index.php/jpsp/article/view/7569</a>
Moments Of Power Lomax Distribution Through Generalized Order Statistics	Applied Mathematics E-Notes	<a href="https://www.math.nthu.edu.tw/~amen/2023/AMEN-220103.pdf">https://www.math.nthu.edu.tw/~amen/2023/AMEN-220103.pdf</a>

### Transforming Ideas into Reality

In the process of transforming ideas into reality, Vishwakarma University inculcates the aspect of innovation right from the entry of a student to the university. Patents have been filed in 2019 as a result of the creative and innovative ideas of the students and faculty.

NAME OF THE PATENT	PATENT APPLICATION NUMBER
Vertical Sewage Treatment Plant	202121043909
The Modified Aerobic Reactor in Vertical Sewage Treatment Plant	202121043910
The Novel Anaerobic System in Vertical Sewage Treatment Plant	202121043877
Freeze Concentration Technology in Vertical Sewage Treatment Plant	202121043907
A Method of Optimization to Minimize Combined Volume of Aerobic and Anaerobic Reactor	202121044823
Design of miniaturized Energy Harvester for Human Shoe Application	202221003245
A Potable Water Treatment and Dispensing System	202221032499
A System For Cooling and Heating Water in a Household Water Purification and Dispensing System	202221032498
An Automated Implantable Cardiac Monitoring Device For Detecting Arrhythmia	202221032500

<https://research.vupune.ac.in/patent>





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