Somaiya Vidyavihar University

Name: Dr. Suchitra M. Patil	E-mail: suchitrapatil@somaiya.edu
Contact No: 9029401033	
Department/Section: Information Technology Department	
College: K J Somaiya School of Engineering	
DOJ Somaiya: 20/05/2006 DOJ SVU: 28/12/2020	Career Experience: 20.2Yrs	Teaching Experience: 20.2 Yrs
Present Academic Designation: (AssistantProfessor)	Present Administrative Designation: - MTech AI&DS coordinator

Area of research/specialization and Courses Delivered

Research domain/interests/areas

1. UAV imagery analysis using AIML
2. Phenotyping for in field crops
3. GIS and Remote Sensing for spatial analytics
4. Satellite Image processing
5. Data science and Visualization

Recognition as a teacher by any University	UG: Yes	PG: Yes	Ph.D.: No
Details of Recognitions 1. Mumbai University 2. Somaiya Vidyavihar University			

Education					
Examination	Name of the Degree	University/Board	Institute/College	Year	CPI/SPI/ %Marks
Ph.D.	Ph.D. (AIML for UAV based phenotyping, Agriculture)	Indian Institute of Technology, Bombay	Centre of Studies in Resources Engineering, IITB	2024	-
PG	M.E.(Computer)	Mumbai	Thadomal Sahani College of Engineering, Mumbai	2012	Distinction
UG	B.E. (Compute science and engineering)	Vishveshwaraih Technological University, Belgum	Hira Institute of Technology, Nidsoshi, Karnataka	2004	Distinction

Research Accomplishments and Projects		
No of students completed PG thesis / Project work as ondate: 03		No of students / groups completed UG projects as on date:35+
Publications Total: 20+	Number of Peer review Journal papers:07+	Number of Conference papers: 15+

Details of Publications:

Copyrights:
1. Registered a copyright with title "Vegetation Insights From Sanjay Gandhi National Park(SGNP): Remote Sensing Dataset" with a number SW-20268/2025.
2. Registered a copyright with title "Floodsight- satellite image classification algorithm for accurate flood mapping" with number L- 148906/2024
3. Registered a copyright with title "Biometric trait matching using improved iris recognition algorithm" with a number L-145557/2024

International Journals:
1. Suchitra Patil, Harsh Mishra, Nilkamal More, Ashwini Dalvi, Venkatramanan R., "Deep Learning Approaches for Weed Species Classification: Efficient Deployment on Edge Device," Journal of Information Systems Engineering and Management, vol. 10, no. 42s, pp. 158–169, May 2025, doi: https://doi.org/10.52783/jisem.v10i42s.7867.
2. Suchitra Patil, Nilkamal More, Abhijeet Pasi, Bhakti Palkar, Manisha Galphade, Nishant More, "Smart Pothole Detection and Geospatial Visualization using Deep Learning and ArcGIS," Journal of Information Systems Engineering & Management, vol. 10, no. 38s, pp. 448–456, Apr. 2025, doi: https://doi.org/10.52783/jisem.v10i38s.6869.
3. Hammouch, H.[†]; Patil, S[†].; Choudhary, S.; El-Yacoubi, M.A.; Masner, J.; Kholová, J.; Anbazhagan, K.; Vanˇek, J.; Qin, H.; Stoˇces, M.; et al. Hybrid-AI and Model Ensembling to Exploit UAV-Based RGB Imagery: An Evaluation of Sorghum Crop's Nitrogen Content. Agriculture 2024, 14, 1682. https://doi.org/10.3390/ agriculture14101682
4. Sheetal Gokhale, Irfan Siddavatam, Ashwini Dalvi, Mohammed Shaikh and Suchitra Patil , "Formal modelling and verification of high interactive honeypot using coloured Petri nets", International Journal of Critical Computer-Based Systems, Vol. 10, No. 3 Published Online:March 3, 2022pp 247 https://doi.org/10.1504/IJCCBS.2022.121365
5. D. H. Kasukurti and S. Patil, "Wearable Device Forensic: probable Case Studies andProposed Methodology", Springer Nature Singapure Pvt Ltd. 2019, S.M.Thampi at al.(Eds.): SSCC 2018, CCIS 969, pp. 1-11,2019.
6. Advait C and Suchitra P., "Simplifying Data Recovery with Advance Techniques and Operations", International Journal of Computer Science And Technology (IJCST), Vol. 7, Issue 4,PP. 217-221, Oct - Dec 2016
7. Prof. Suchitra P, Sushant S., Amruta Y. and Rohan S, "Location Based Addvertising", IJRITCC, volume3, issue3, pp.1357-1360, March 2015
8. Prof. Nilkamal More, Prof.Suchitra Patil, "Recommending an Insurance Policy Using Association Rule Mining", International Journal for Innovative Research in Science & Technology, Sept 2014, Issue 1 Volume 4
9. H B Kekre, Tanuja Sarode and Suchitra M Patil. " 2D Image Morphing With Wrapping UsingVector Quantization Based Colour Transition",(IJCSIS)International
Journal of Computer Science and Information Security,Vol.9, No.7 , pp. 75-82, 2011.
Received Best paper award for this article.

International/ national Conferences

1. Abstract accepted and presented : ANSICON 2025, Ayodhya
2. **Paper accepted and presented :** 'Deforestation Risk Prediction Using Multi-Temporal NDVI and Machine Learning: a Case Study of Mumbai's Suburban Areas' in IEEE INTERNATIONAL CONFERENCE ON NEXT-GEN TECHNOLOGIES OF ARTIFICIAL INTELLIGENCE AND GEOSCIENCE REMOTE SENSING (EarthSense 2025), K.L. University, Hyderabad.
3. **Paper accepted and presented:** 'Explainable AI for Loan Approval and Risk Analysis in Banking', in an IEEE 16th INTERNATIONAL CONFERENCE ON COMPUTING, COMMUNICATION AND NETWORKING TECHNOLOGIES (ICCCNT)
IIT Indore, India

4. **Paper accepted& presented:** 'Deep Learning-Based Automated Leaf Counting for Sorghum Phenotyping', in International Conference on Technologies for Energy, Agriculture, and Healthcare 2025, KJSSE, SVU.

5. **Paper accepted and presented:** 'Deep Learning for Wildfire Detection Using Remote Sensing Images', in International Conference on Technologies for Energy, Agriculture, and Healthcare 2025, KJSSE, SVU.
   Received best paper award for this paper

6. Suchitra Patil, Nilkamal More & Manish Patil , "AI-Driven Water Quality Prediction For Sustainable Marine Agriculture Amid Climate Change", Proceedings of International conference on climate change 2025 (ICCC 2025), volume I, ISBN -978-93-48606-60-0.

7. Nilkamal More, Suchitra Patil, Sanika Desai, Twisha Ahuja , Diya Sethi, Nikita Singh & Anurag Ghosh, "Smart Mangrove System" , Proceedings of International conference on climate change 2025 (ICCC 2025), volume II, ISBN -978-93-48606-60-0.

8. Suchitra Patil, Sunita Choudhary, Jana Kholova, Krithika Anbazhagan, Priyanka Gattu, Srikanth Mallayee, P Rajalakshmi, Magesh Chandramouli, and J Adinarayana. "Can UAV-based field phenotyping minimize human bias in scoring senescence? A case of sorghum" Poster presentation at an international conference on millets, Kochi, Kerala. (July 5 – July 7, 2023).
   Received an award for third place in the poster presentation at this conference

9. S. M. Patil et al., "UAV-based Digital Field Phenotyping for Crop Nitrogen Estimation using RGB Imagery," 2023 IEEE IAS Global Conference on Emerging Technologies (GlobConET), London, United Kingdom, 2023, pp. 1-6, doi: 10.1109/GlobConET56651.2023.10150110.

10. Patil, S., Mehta, J.M., Salunkhe, H.S., Shah, H.V. (2021). Kickstarter Project Success Prediction and Classification Using Multi-layer Perceptron. In: Prateek, M., Singh, T.P., Choudhury, T., Pandey, H.M., Gia Nhu, N. (eds) Proceedings of International Conference onMachine Intelligence and Data Science Applications. Algorithms for Intelligent Systems. Springer, Singapore. https://doi.org/10.1007/978-981-33-4087-9_60.
    Received Best Paper award for this paper.

11. Bhangale, Ujwala, Suchitra Patil, Vaibhav Vishwanath, Parth Thakker, Amey Bansode, and Devesh Navandhar. "Near real-time crowd counting using deep learning approach." Procedia Computer Science 171 (2020): 770-779.

12. Toraskar T., Bhangale U. M., Patil S. M., More N., (2019) Efficient Computer Forensic Analysis Using Machine Learning Approaches, IEEE BOMBAY SECTION SIGNATURE CONFERENCE – IBSSC-2019, IIT Bombay, Victor Menezes Convention Centre (VMCC) IIT Bombay, July 26-28, 2019

13. Ujwala Bhangale, Swapnil More, Tanishq Shaikh, Suchitra Patil, Nilkamal More, Analysis of Surface Water Resources Using Sentinel-2 Imagery,Procedia Computer Science,Volume 171, 2020, Pages 2645-2654,ISSN 1877-0509, https://doi.org/10.1016/j.procs.2020.04.287..

14. Patil, Suchitra, Ujwala Bhangale, Asha Khatri, Shruti Gudkha, and Riya Savla. "Rapid Flood Detection Using Remote Sensing Images." In 2019 International Conference on Advances in Computing, Communication and Control (ICAC3), pp. 1-6. IEEE,2019.

15. Prof. Suchitra Patil , Tanmay Angre , Hiral Bhanushali , Yash Tank ,"Classification andpam image detection in smartphones", 2nd International Conference on Advances in Science & Technology (ICAST-2019)

16. Suchitra Patil, Ujwala Bhangale, Nilkamal More,"Comparative Study of Color Iris Recognition:DCT vs. Vector Quantization approaches in RGB and HSV Color Spaces", IEEE co-sponsered, International Conference on Advances in Computing, Communications and Informatics (ICACCI), Sept, 2017.

17. H B Kekre, Tanuja Sarode and Suchitra M Patil. "2D Image Morphing using Pixels basedColor Transition Methods", IJCA Proceedings on International Conference and workshop on Emerging Trends in Technology (ICWET) (4):6-13, 2011. Published by
Foundation of Computer Science

Books and Book chapters

Book Chapters
1. Patil, S.M., Henke, M., Chandramouli, M., Jagarlapudi, A. (2023). Role of Virtual Plants in Digital Agriculture. In: Chaudhary, S., Biradar, C.M., Divakaran, S., Raval, M.S. (eds) Digital Ecosystem for Innovation in Agriculture. Studies in Big Data, vol 121. Springer, Singapore. https://doi.org/10.1007/978-981-99-0577-5_8
2. Patil, S.M., Choudhary, S., Kholova, J., Chandramouli, M., Jagarlapudi, A. (2024). Applications of UAVs: Image-Based Plant Phenotyping. In: Priyadarshan, P.M., Jain, S.M., Penna, S., Al-Khayri, J.M. (eds) Digital Agriculture. Springer, Cham. https://doi.org/10.1007/978-3-031-43548-5_11

Books
1. Analog and Digital Circuits: Nandu Publication Mumbai71
2. Digital Logic Design and Analysis: Nandu Publication Mumbai 71

Details of Research / consultancy / projects:

Completed: nil   On-going: one   Applied: o n e

1. Telecom Technology Development Fund(TTDF) proposal on Quantum Encryption Algorithm-applied(results awaited0

FDPs/Seminars/Workshops/Training Programs Attended/ Organized/ Delivered

Attended

1. FDP on satellite data analysis with deep learning and python programing, March 12, 2024 to March 28, 2024, EduxLabs in association with Mechanica IIT Madras.
2. FDP on AWS Cloud Fundamental and Services, March 27, 2024 to March 31,
3. 2024, IT department, SINHGAD INSTITUTE OF TECHNOLOGY, LONAVALA
4. FDS on Gray box probing generative AI, January 8 2024 to Janurary 13, 2024,
5. Fr. CrIT, Vashi, Mumbai.
6. Workshop on Capacity building workshop for early career researchers, March 19, 2024 to March 21, 2024, FSDC, SVU, Mumbai.
7. Attended FDP on "Mentoring Educators in Educational Technology(FDP301x)" by Indian Institute of Technology Bombay, at K. J. Somaiya College of Engineering, Mumbai from May17,2018 to July 05,2018.
8. Attended Two-Day Weekend Training Programme - Saptahaant Shikshak Prashikshan (SSP) on "Introduction toMachine Learning",16-17 Dec, 2017.
9. Attended FDP on "Pedagogy for Online and Blended Teaching-Learning Process" by Indian Institute of Technology Bombay, at K.J. Somaiya College of Engineering,Mumbai from 14 Sep 2017 to 12 Oct 2017.
10. Attended FDP on "FDP101x Foundation Program in ICT for Education" by Indian Institute of Technology Bombay, at K. J. Somaiya College of Engineering, Mumbai from 27 July 2017 to 7 Sep 2017.
11. Completed 4 week online course on "Python Programming- A Concise Introduction", by Wesleyan University on Coursera, 28 June, 2017
12. Attended one week STTP on " High Performance Computing with CUDA, MPI, OPENMP", VIT, Wadala, Feb 2016.
13. Attended two days workshop on "Frameworks", KJSCE, March 2016.
14. Attended two weeks ISTE STTP on "Parallel Processing and Big Data Analytics", SPIT, Andheri, July 2015.
15. Attended Faculty Development Program on "Big Data & Hadoop", J.P. Morgan, Mumbai, Feb 13, 2015
16. Attended Workshop on "Evaluation of open ended activities through Rubrics", KJSCE, Aug 2014
17. Attended Faculty development programme on "Open Source Technologies", TSEC, July 2014.
18. Attended Workshop on "Advanced Engineering Optimization Techniques",KJSCE, Feb 2014
19. Attended orientation programon "Web Programming", K.C. College of Engineering and Management Studies and Research, Janurary 2014.
20. Attended one week ISTE graded STTP on "Structured Programming Approach with lab exercises" at SPIT, 31st December 2012 to 5th January 2013.
21. Attended Two days ISTE workshop on "Aakash for Education", organized by IITB and conducted at KJSCE, 10th – 11th November 2012
22. Attended Coordinators' Workshop on Software Development Techniques for Teachers of Engineering and Science Institutes, IITB, September, 2011.
23. Attended Faculty development programme on "Research Career Success and Survival Tips", FRCRCE, Bandra, March 2011.
24. Attended International Conference and Workshop on Emerging Trends in Technology (ICWET 2011), Thakur COE, 25th -26th February 2011.

25. Attended one week Short Term Training Programme on " Web Engineering– A practical approach", DBIT, Vidyavihar , May 15- 22, 2009
26. Attended one week Short Term Training Programme on "Hardware Description Languages for Digital System Design", KJSCE, January 5 -9, 2009.
27. Attendedone   week seminar and workshop on "Project Management" at K.J.S.C.E., Jan 14 - 18 2008.
28. Attended One day Workshop on IT Trends and Challenges on August 30, 2005.

Organized

1. Coordinator for Short term training program on "AI and ML-enhanced Geospatial Analytics: Real world case studies", from July 8, 2024 -July 11, 2024.
2. Coordinator for Short term training program on "Secure and Sustainiable Blockchain Development: Innovation for Next Web 3", from July 1, 2024 - July 5, 2024.
3. Coordinated Hackathon on Python programming , November 9, 2019.
4. Conducted a session on " Introduction to Shell scripting", for MTech (IS) students, September 12, 2018
5. Conducted Workshop on " Google Forms", IT Dept., KJSCE, March 15, 2014
6. Assisted Workshop on "Database Management System", IITB -KJSCE, 21st-31st May 2013.
7. Co coordinated Workshop on "Software Development Techniques for Teachers of Engineering and Science Institutes", IITB -KJSCE, November 2011

Delivered
1. A session on "Image Processing - An AI/ML approach" at in preconference event of 3rd edition of Women in Optics and Photonics India (WOPI) 2024 conference to be held at IIT Bombay from 6-8 December 2024.
2. A session on " Case study on Google Earth Engine" in Short term training program on " AI and ML-enhanced Geospatial Analytics: Real world case studies", July 11, 2024
3. A full day session on topic "Understanding attribute data (theory) and Working with Tables (hands on)" in "21 Days long Summer School in Geospatial Science and Technology (Level 1) on May 31, 2024.
4. Delivered a talk on "UAV (unmanned aerial vehicles) enabled image-based high throughput field phenotyping: A Case Study" at one day workshop on "UAVs for Advanced Agricultural Applications" on April 4, 2023 at International Crops Research Institute for Semi-Arid Tropics(ICRISAT), India
5. One day hands on session on HTML and JavaScript for trainees of DRP Global Tech Pvt. LTD on April 28, 2018
6. A session on "Programming and debugging in GCC", in STTP on"
7. Open source softwares: An effective way of managing engineering education" organized by department of computer engineering, KJSCE. May 2006

	Notable Key Scholastic Achievements
1.	Received a best paper award for paper in International Conference on Technologies for Energy, Agriculture, and Health(ICTEAH) 2025, Mumbai
2.	Received award for third place in ICM-BPGBN- 2023, International Millets conference held at Kochi , Kerala.
3.	Received award for best paper for paper in International conference on Machine Intelligence and Data Science Applications(MIDAS), 2020.
4.	Paper selected for best paper category in award for paper in International Journal of Computer Science and Information Security (IJCSIS), 2011.

Signature of Faculty member