

Somaiya Vidyavihar University

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|---|--|--------------------------|----------------------------------|---------------------------------------|--------------------------------|
| Name: Dr. Sujata P Pathak | | | E-mail: sujatapathak@somaiya.edu | | |
| Contact No: 022-66449191/9406 | | | | | |
| Department/Section: Information Technology | | | | | |
| College: K J Somaiya College of Engineering | | | | | |
| DOJ Somaiya: 02/06/2003 | | Career Experience: 22Yrs | | Industry Experience: - NA | Teaching Experience: 22 Yrs |
| Present Academic Designation: Assistant Professor | | | | Present Administrative Designation: - | |

| Area of research/specialization and Courses Delivered | | | | | |
|---|--|--|--|--|--|
| Research domain/interests/areas | | | | | |
| <ol style="list-style-type: none"> 1. Image processing and analysis 2. Machine learning and deep learning 3. Speech processing 4. Digital Forensics | | | | | |
| Courses Delivered | | | | | |
| <ol style="list-style-type: none"> 1. Fundamentals of Data Science 2. Deep learning 3. Digital Signal and Image Processing 4. Soft Computing 5. Information and Network Security, 6. Computer Graphics 7. Information Theory and coding 8. Image Processing 9. Computer Graphics & Virtual Reality 10. Digital Forensics and Analysis 11. Introduction to Data Science | | | | | |

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|---|---------|---------|-----------|
| Recognition as a teacher by any University | UG: Yes | PG: Yes | Ph.D.: No |
| Details of Recognitions | | | |
| <ol style="list-style-type: none"> 1. PG teacher for M.Tech. in IT (specialization in Information Security)- Mumbai University 2. UG teacher- Mumbai University | | | |

| Education | | | | | |
|-------------|--------------------|--------------------------------|--------------------------------|------|----------------|
| Examination | Name of the Degree | University/Board | Institute/College | Year | CPI/SPI/%Marks |
| Ph.D. | Ph.D. | Mumbai | KJSCE | 2025 | -- |
| PG | M.E. | Mumbai | TSEC, Mumbai | 2010 | 72% |
| UG | BE | Dr, B.A.M.U., Aurangabad | MBES, COE, Ambajogai | 2001 | 73% |
| Diploma | Diploma in EXTC | Dr. B.A.T.U, Lonere, Raigad | Dr. B.A.T.U, Lonere, Raigad | 1997 | 74% |

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| Notable Experience Details | | | | | |
|----------------------------|--------------------------|---------------------|-----------------|-----------------|--------------------|
| Sr. No | Name of the organization | Designation | Date of Joining | Date of Leaving | Experience (Years) |
| 1. | KJSCE | Assistant Professor | 02/06/2003 | Till date | 22 |

| Research Accomplishments and Projects | | |
|--|--|---|
| No of students pursuing Ph.D. as on date: NA | | No of students completed Ph.D. as on date: NA |
| No of students completed PG thesis / Project work as on date: 06 | | No of students / groups completed UG projects as on date: 30+ |
| Publications Total:20 | Number of Peer review Journal papers: 11 | Number of Conference papers:6 |

Details of Publications:

International Journals

1. Sujata P Pathak, Sonali A Patil, Dharendra Mishra, "Enhancing Solar Panel Fault Detection: An Efficient Multidomain Feature Analysis Model with Entropy-Guided Saliency Map Segmentation", International Journal of Intelligent Engineering & Systems, Volume 17, Issue 4, 2024, DOI: 10.22266/ijies2024.0831.25
2. S. P. Pathak and S. A. Patil, "Evaluation of Effect of Pre-Processing Techniques in Solar Panel Fault Detection," in IEEE Access, vol. 11, pp. 72848-72860, 2023, doi: 10.1109/ACCESS.2023.3293756.
3. Sujata Pathak, Dr. Sonali Patil, Shailee Patel, "Solar Panel Hotspot Localization and Fault Classification using Deep Learning Approach", International Conference on International Conference on Industry Science and Computer Sciences Innovation (iSCSi'22), Elsevier Computing Procedia, Vila Nova de Gaia – Portugal, Feb 2022
4. Divya Suvarna, Sujata Pathak, "Development of highly secured and improved CAPTCHA system by using dynamic word cloud security", International Journal of Advanced Computational Engineering and Networking, ISSN(p): 2320-2106, ISSN(e): 2321-2063, Volume-7, Issue-9, Sep.-2019, pp. 31-37
5. Divya Suvarna, Sujata Pathak, "Development of Secure CAPTCHA System by Using Dynamic Tag Cloud System", International Journal of Innovative Technology and Exploring Engineering (IJITEE), 1-5, ISSN: 2278-3075, Volume-X, Issue-X, December 2018
6. Rahul Tulaskar, Sujata Pathak, "Host Protection using Process White-Listing, Deception and Reputation Services", International Journal of Innovative Research in Information Security (IJIRIS), 1-12, Issue 2, Volume 5, February 2018
7. Mihir Shah, Prof. Sujata Pathak, "Hybrid Cryptosystem for Secure Data Storage", International Journal of Innovative Research in Information Security (IJIRIS), Issue 11, Volume 4, November 2017
8. Prof. Sujata Pathak, Priyanka Sarode, "Privilege Identity Management- Cyber ark", International Journal of Technical Research and Applications", 322-325, Volume 4, Issue 3 (May-June, 2016)
9. Prof. Sujata Pathak, Mr. Manish Bane, "Location Tracking with Safe Paths and Safe Zones in Android" International Journal on Recent and Innovation Trends in Computing and Communication, 30-32, Volume 4, Issue 1, Jan 2016
10. Mrs. Sujata Pathak, Ms. Kathani Patel, Ms. Darshini Haria, "Audio watermarking based on 3-level DWT", International Journal of Innovative Research in Science and Technology, 202-207, Volume 1, Issue 10, March 2015
11. Prof Sujata Pathak, Pratik Saraf, Shankar Ramesh, Sachin Patel, "Automatic Evaluation System for Student Code", International Journal of Computer Science and Information Technologies, 1869-1871, Volume 6(2), 2015

Conferences

12. A. Parmar, S. Gada, T. Loke, Y. Jain, S. Pathak and S. Patil, "Secure E-Voting System using Blockchain technology and authentication via Face recognition and Mobile OTP," 2021 12th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kharagpur, India, 2021, pp. 1-5, doi: 10.1109/ICCCNT51525.2021.9580147.
13. Pathak, Sujata and Shah, Drishti and Shah, Nida and Shah, Viraj and Ughade, Saurabh, Farmer Awareness and Cost Estimation (April 8, 2019). 2nd International Conference on Advances in Science & Technology (ICAST) 2019 on 8th, 9th April 2019 by K J Somaiya Institute of Engineering & Information Technology, Mumbai, India, Available at SSRN: <https://ssrn.com/abstract=3367666> or <http://dx.doi.org/10.2139/ssrn.3367666>
14. Pathak, Sujata and Parikh, Shreya and Bhat, Adviat and Chabada, Amandeep Singh and Ganesh, Arvind, Automated Fire Evacuation System with Congestion Control (April 9, 2019). 2nd International Conference on Advances in Science & Technology (ICAST) 2019 on 8th, 9th April 2019 by K J Somaiya Institute of Engineering & Information Technology, Mumbai, India, Available at SSRN: <https://ssrn.com/abstract=3372099> or <http://dx.doi.org/10.2139/ssrn.3372099>
15. Rugnesh Kanojia, Prof Sujata Pathak "Secured Vehicle Toll Payment System using NFC", Fourth International Conference on Computing Communication Control and Automation (ICCUBEA), August 2018, doi:10.1109/ICCUBEA.2018.8697638
16. H. Chadha, S. Mhatre, U. Ganatra and S. Pathak, "HTML Voice," 2018 Fourth International Conference on Computing Communication Control and Automation (ICCUBEA), Pune, India, 2018, pp. 1-4, doi: 10.1109/ICCUBEA.2018.8697733.
17. Prof. Sujata Pathak, Prof. Arun Kulkarni, "Recognizing Emotions from Speech", International conference on Electronics and Computer Technology, Kanyakumari, India, Volume 4, 107-109, April 2011

Books/Book Chapters

18. Pathak, S.P., Patil, S.A. (2023). Analysis and Evaluation of Pre-processing Techniques for Fault Detection in Thermal Images of Solar Panels. In: Shetty, N.R., Patnaik, L.M., Prasad, N.H. (eds) Emerging Research in Computing, Information, Communication and Applications. Lecture Notes in Electrical Engineering, vol 928, pp 673–690, Springer, Singapore. https://doi.org/10.1007/978-981-19-5482-5_59
19. Kartik Pinakin Desai, Mihir Akshay Shah, Mansi Chetan Lapasia, Sonali Atulkumar Patil, Sujata P. Pathak, "Applied Intelligence for Mental Health Detection: ManoVaidya – A Mental Health Therapist" Handbook of Research on Applied Intelligence for Health and Clinical Informatics (DOI: 10.4018/978-1-7998-7709-7.ch005), pages 80-91, Oct 2021
20. Suvarna, D., Pathak, S. (2020). Threat Modeling for Breaking of CAPTCHA System. In: Pandian, A., Ntalianis, K., Palanisamy, R. (eds) Intelligent Computing, Information and Control Systems. ICICCS 2019. Advances in Intelligent Systems and Computing, vol 1039. Springer, Cham. <https://doi.org/10.1007/978-3-030-30465-2>.

Patents/Copy Rights –

Patent on "A SUTURE DEVICE", dated Oct 02, 2020, Dr. Lekurwale, Ramesh Ramkisan, Prof. Pansare Rajesh, Prof. Pathak Sujata, Dr. Patil Sonali, Dr. Joglekar, Jyoti, Dr. Gupta, Sudha, Prof. Patil Priyanka, Prof. Karmarkar Abhijeet, Prof. Bhambhure Shilpa, Dr. Chivate D Shantikumar

Copyright- Mrs. Sujata P Pathak, Dr. Sonali A Patil, "SALIENCY MAP GUIDED MULTIDOMAIN ANALYSIS MODEL FOR IMPROVED SOLAR PANEL FAULT DETECTION AND CLASSIFICATION", Reg. No.-SW-17711/2023, Date-07/12/2023

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| FDPs/Seminars/Workshops/Training Programs Attended/ Organized/ Delivered |
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| <p>Delivered</p> <ol style="list-style-type: none"> 1. Expert sessions on <ol style="list-style-type: none"> a. Introduction to SAGA and Change Detection with SAGA (Hands on) b. Geospatial Analysis with SAGA (Hands on) c. Understanding the image (histogram) (Hands on) during 21-day-long Summer School in Geospatial Science And Technology (Level 1), National Geospatial Program (NGP) under the aegis of the Department of Science and Technology, Government of India, KJSCE, Mumbai, 27 May to 16 June, 2024. |
| <p>Attended</p> <ol style="list-style-type: none"> 1. Three-week online course on “Generative AI for Everyone”, Coursera, August 2024 2. One-week ISTE approved STTP on “AI and ML-Enhanced Geospatial Analytics: Real World Case Studies”, IT Department, KJSCE, 8th July to 12th July 2024. 3. One week FDP on “Industry 5.0 for Society 5.0”, Department of Electronics and Telecommunication Engg, VIT, Pune, 8th to 22nd March 2024 4. Annual Research Meet 2024, organized by SVU, Mumbai, 29th to 31st Jan, 2024 5. One-week National Level Faculty Development Programme on “Cloud Computing”, Department of Artificial Intelligence, G H Rasoni Institute of Engineering & Technology, Nagpur, & Center of Excellence in Cloud Computing, Dept of Data Science, IoT & Cyber Security (DIC), 22nd to 27th May, 2023 6. Training program on National Intellectual Property Awareness Mission”, Intellectual Property Office, India, April 06, 2023 7. Seminar on “Recharge Your Soul by Meditation with Brahmakumaris”, organized by WDC, SVU, March 03, 2023 8. NPTEL 12 weeks online course on “Deep learning for Computer Vision”, July-Oct-2022 9. Training program on “IP awareness”, under National Intellectual Property Awareness Mission, organized by Intellectual Property Office, India, September 06, 2022 10. Online “Reviewer workshop: How to get the most out of being a reviewer of scientific articles”, August 10, 2022 11. Online Training Session on “Develop your learning and research skills using IEEE Xplore Digital Library”, organized by KJSCE Library along with IEEE & EBSCO Information Services, July 27, 2021 12. International Webinar on “Strengthening Your Understanding of Research Journals (Reading, Referencing and Publishing)”, by K. J. Somaiya College of Science and Commerce in collaboration with ELSEVIER, July 10, 2021 13. Webinar on “Publishing Ethics”, Jointly organized by Taylor and Francis Group and National Knowledge Resource Consortium (NKRC), CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), 23rd June 2021 14. Webinar on “Peer Review Excellence: How to be an effective Peer Reviewer”, Jointly organized by Taylor and Francis Group and National Knowledge Resource Consortium (NKRC), CSIR-National Institute of Science Communication and Policy Research (CSIR-NIScPR), 22nd June 2021 15. Two Days’ National Workshop on “Recent Trends in Artificial Intelligence”, in collaboration with PDEU and Computational Intelligence Society, IEEE Gujarat Section, 9th & 10th April 2021 16. International Conference on “Industry Science and Computer Sciences (iSCSi), Vila Nova de Gaia, Portugal, 11th March, 2022 (Online mode) 17. International Conference on Emerging Research in Computing, Information, Communication and Applications”, (online mode), 24- 26, February 2022, at NMIT, Bangalore, India 18. Faculty Development Program on “Post Covid Challenges: What industry expects from Academia?”, jointly organized by TCS and KJSCE, January 08, 2021 19. STTP on “Leveraging Artificial Intelligence and Data Analytics for Healthcare”, organized by department of IT, KJSEIT and sponsored by AICTE under AQIS 2019-20, 14-19 Dec 2020. |

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20. Online quiz on “Computer Security Awareness”, organized by Department of Information Technology, KJSCE, 30th Nov 2020.
21. Online non-credit course on “Neural Networks and Deep Learning”, authorized by DeepLearning.AI and offered through Coursera, 30th August, 2020.
22. Webinar on “Boost Research Navigation through RAX”, organized by K J Somaiya College of Science and Commerce in collaboration with RAX Labs, 13th June, 2020
23. Online National Workshop on “Fine Tuning Research Planning using Elsevier Tools: Science Direct, Scopus and Mendeley”, organized by K J Somaiya College of Science and Commerce, in collaboration with Elsevier, 25th April, 2020
24. Self-paced workshop on, “Effective and Efficient Online Teaching in the Age of Corona, A Hands-on Workshop”, Teaching Learning Centre (ICT) at IIT Bombay, funded by PMMMNMTT, MHRD, Govt. of India, 23 May 2020
25. International Professional Development program on “Teaching and research in Engineering and Sciences”, Melbourne, Australia, 28 Aug- 09 Sept 2019
26. IQAC, KJSCE Organized Two Days Leadership Development program, 12-13 January, 2018
27. Two weeks FDP on “Pedagogy on online and Blended Teaching-Learning Process (FDP201x)”, organized by IITB, September 18- Oct 12, 2017
28. Medical device Innovation Camp (MEDIC 2017), COEP, Pune, 13-17 September, 2017
29. Two weeks FDP on “Foundation program in ICT for Education”, organized by IITB, Aug 08 – Sept 07, 2017
30. IQAC, KJSCE Organized Three Days Training Programme for Newly Designated HODs, Deans and other Functional Heads, 6-8 June, 2017
31. ISTE approved STTP on “Social, Mobile, Analytics and Cloud (SMAC)”, organized by department of Computer Engineering, KJSCE, December 05-09, 2016
32. Two- days workshop on “Qualnet”, organized by KJSCE, 22-23 September, 2015.
33. One day CSI-InfoComm Program for defence Sector organized by CSI, Mumbai Chapter, at Bombay Exhibition Centre, Mumbai, September 01, 2015
34. One week Mumbai University approved FDP on “Recent Advances in Big Data Technologies & Applications” in association with CMP Infotech, at KJSIET, Mumbai, May 04-08, 2015
35. Two days workshop on "Soft computing (Neural Network, Fuzzy Logic) and Neuromorphic Engineering" in association with CRINE, SPIT, Andheri, February 07-08, 2014
36. One-week graded ISTE- STTP on “Structured Programming Approach with Lab Exercises”, organized by SPIT, Andheri, Mumbai, December 31-January 05, 2013.
37. Two-days ISTE workshop on “Aakash for Education”, conducted by IIT, Bombay, 10-11 Nov., 2012
38. One-week workshop on “Scilab- an Open-Source Platform for Numerical Computation”, funded by the NME-ICT, MHRD through IIT Bombay. June 13-June 17, 2011.
39. ISTE approved one week STTP on “Gaming Architecture and Programming”, organized by Fr.CRIT, Vashi, Navi Mumbai, January 10- January 14, 2011.
40. I.S.T.E approved two-week Workshop on “Database Management System” in K.J.S.C.E., Mumbai. (Dec 13- Dec. 23, 2010).
41. One-week Training Program on “Core Java” for the faculty of KJSCE held at KJSCE, Mumbai, June 2010.
42. National Conference on “Emerging Trends in Computer, Communication and Information Technology” at K.J.S.C.E., Vidyavihar, Mumbai, March 20-21, 2009
43. ISTE approved Short Term Training Program on “Multimedia System Design” organized by DBIT, Vidyavihar, Mumbai, January 03-14, 2005.
44. One-day workshop on ‘Digital Signal Processing’, at TSEC, Mumbai.

Organized

1. Member for Hospitality team during ICTEAH 2024, KJSCE, Mumbai
2. Member for Decoration and Backstage Arrangement Committee, “Bharat Tech Foundation” Trio Conclave in the Vidyavihar Campus on April 2-3, 2024.

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3. Member of decoration and backstage committee for Association of Indian Universities (AIU), December 19-20, 2023.
4. Mentor for “Medical Device Hackathon (MEDHA)” stage 1, BETiC, IIT Bombay, 20th May to 27th May, 2023
5. Guest lecture on “Research opportunities in Medical Image Processing”, Dr. Mehul Rawal, Ahmedabad University, Ahmedabad.
6. Guest lecture on “Applications of Applied Mathematics, Data Structure and Analysis of Algorithms, Programming Languages”, Mr. Pratik Dubal, 1 November 2017
7. Guest Lecture on “Forensics using Encase”, by Mr. Sachin Bhuvad, Lab Systems, IT Department, KJSCE, March 10, 2016
8. One-day seminar on “Digital Forensics using Encase” by Mr. Vaibhav Sakhare, Feb. 06, 2016
9. Industrial visit to SSDSRC, SHAR, Shriharikota for BE and M.Tech. students, (Oct. 11-Oct 15, 2015)
10. Two days workshop on “Qualnet”, at KJSCE, Mumbai (September 22-23, 2015)
11. ISTE approved Two-week Short-Term Training Program on ‘Image Processing and Multimedia: Technologies and Applications’, at KJSCE., Mumbai. (June 25- July 06, 2007)
12. One-day seminar on “Virtual Reality Systems”, by Mr. Dinesh Sarode, BARC, Mumbai, at KJSCE under CSI Students’ Chapter, 2005

| Notable Positions and Responsibility | |
|--------------------------------------|--|
| 1. | Head of Information Technology department, Aug 03, 2017, to Feb 28, 2019 |
| 2. | Associate HoD, Information Technology department, July 01, 2017, to July 31, 2017 |
| 3. | ISTE Students’ Chapter- Faculty advisor (2013-2016) |
| 4. | PG Coordinator (M. Tech IT specialization in Information Security) from July 2015 to July 2017 |
| 5. | PUSH committee- Member |
| 6. | Department Examination Committee- Member |

Date: 15/08/ 2024

Signature of Faculty Member