Somaiya Vidyavihar University

Name: Rupali Pankaj Patil		**E-mail: rupalipatil@somaiya.edu**
Contact No: 9820993651		
Department/Section: Electronics and Telecommunication Engineering		
College: K J Somaiya College of Engineering		

DOJ Somaiya: 02-07-2007	Career Experience: 16 Yrs	Industry Experience:_Nil	Teaching Experience:16 Yrs
Present Academic Designation: Assistant Professor		Present Administrative Designation: (Principal/Vice-Principal/ Associate Dean/ HOD etc)	

Area of research/specialization and Courses Delivered
Research domain/interests/areas Signal Processing & Information Systems, Machine learning, Deep learning & Artificial Intelligence, Data science, Computer Vision, Communication & Data Networks. Courses Delivered Principles of Data Science, Data Structures and Analysis of Algorithms in Python and C, Computer Vision, Programming in C, Wireless communication, Wireless Networks, Signals and Systems, Random signal analysis, Data analysis and Interpretation, Image Processing, Mobile Communication, Digital Logic Design for UG, Image and Video Processing for PG (EXTC), Research Methodology for Ph.D.

Recognition as a teacher by any University	UG: Yes	PG: Yes	Ph.D : Yes

Details of Recognitions
  1. UG teacher recognition by Mumbai University
  2. PG teacher recognition by Mumbai University
  3. PhD Guide approval by Somaiya Vidyavihar University			

Education					
Examination	Name of the Degree	University/Board	Institute/College	Year	CPI/SPI/ %Marks
Ph.D	Electronics and Telecommunication Engineering	Mumbai University	Rajiv Gandhi Institute of Technology, Andheri, Mumbai	May 2020	---
PG	Electronics Engineering	Mumbai University	Ramrao Adik Institute of Technology, Nerul, Navi Mumbai	August 2008	68.05 % (First class)
UG	Electronics and Telecommunication Engineering	North Maharashtra University, Jalgoan	Government college of Engineering	July 2002	67.64 % (First class with Distinction)

Notable Experience Details					
Sr. No	Name of the organization	Designation	Date of Joining	Date of Leaving	Experience (Years)
1.	K.J. Somaiya College of Engineering, Vidyavihar	Assistant Professor	02/07/2007	Till today	16

2.	Ramrao Adik Institute of Technology, Mumbai	Lecturer	01/01/2006	31/12/2006	01

Research Accomplishments and Projects	
No of students pursuing Ph.D as on date: Nil	No of students completed Ph.D as on date:Nil
No of students completed PG thesis / Project work as on date: 03	No of groups completed UG projects as on date: 20+

Publications Total: 19	Number of Peer review Journal papers: 07	Number of Conference papers: 10

Details of Publications:

International Journals

1. Patil R, Karandikar R. Computationally Efficient LOB Algorithm for Digitization of Degraded Paper ECG Reports. *Biomed Pharmacol J* 2023;16(1).

2. Sawant, Manisha, Rupali Patil, Tanmay Shikhare, Shreyas Nagle, Sakshi Chavan, Shivang Negi, and Neeraj Dhanraj Bokde. "A Selective Review on Recent Advancements in Long, Short and Ultra-Short-Term Wind Power Prediction." *Energies* 15, no. 21 (2022): 8107.

3. Akshay Yadav, Rupali Patil and R.G.Karadikar,"Alalysis of static and dynamic characteristics of IPv4 and IPv6", *Gradiva review journal*, 25th April2022 DOI: 10.37897.GRJ.2022.V8I8.22.50382.

4. Mishra, Siddharth, Gaurav Khatwani, Rupali Patil, Darshan Sapariya, Vruddhi Shah, Darsh Parmar, Sharath Dinesh, Prathamesh Daphal, and Ninad Mehendale. "ECG Paper Record Digitization and Diagnosis Using Deep Learning." *Springer Journal of Medical and Biological Engineering* (2021): 1-11

5. Patil, Rupali, and Ramesh Karandikar. "Image digitization of discontinuous and degraded electrocardiogram paper records using an entropy-based bit plane slicing algorithm." *Elsevier Journal of electrocardiology* 51, no. 4 (2018): 707-713.

6. Patil, Rupali, and R. Karandikar. "Robust algorithm for digitization of degraded electrocardiogram paper records." *ICTACT Journal on Communication Technology* 8, no. 3 (2017).

7. Rashi Shah, Srushti Aparajit, Riddhi Chopdekar and Rupali Patil, "Machine Learning based Approach for Detection of Cyberbullying Tweets", *International Journal of Computer Applications* 175(37):52-57, December 2020.

Conferences

8. Aparajit, Srushti, Rashi Shah, Riddhi Chopdekar, and Rupali Patil. "Data Protection: The Cloud Security Perspective." In *2022 3rd International Conference for Emerging Technology (INCET)*, pp. 1-5. IEEE, 2022.

9. Pradhan, Shradha S., and Rupali Patil. "Comparison of Deep Learning Approaches for Plant Disease Detection." *Lecture Notes on Data Engineering and Communication Technology*, pp. 575-583. Springer, Singapore, 2020.

10. Jasmine Shaikh, Rupali Patil, "Fake News Detection using Machine Learning" in *IEEE International Symposium on Sustainable Energy, Signal Processing and Cyber Security (iSSSC)*, 16-17 December 2020, Gunupur, Kolkata, India

11. Jasmin Mulla, Ajay Khandare, Rupali Patil, "Timing Signal Generator for High Frequency Radar", in *IEEE International Conference for Convergence in Engineering, ICCE2020,* 5-6 September, 2020, Kolkata, India.

12. R. Patil, N. Gada and K. Gala, "Twitter Data Visualization and Sentiment Analysis of Article

370," *2019 International Conference on Advances in Computing, Communication and Control (ICAC3)*, Mumbai, India, 2019, pp. 1-4.

13. Patil, Rupali, and Ramesh Karandikar. "Digitization and Parameter Extraction of Preserved Paper Electrocardiogram Records." *In Soft Computing and Signal Processing*, pp. 487-495. Springer, Singapore, 2019.

14. Patil, Rupali, and R. G. Karandikar. "Digital signal preservation approaches of archived biomedical paper records—A review." In *2016 5th International Conference on Wireless Networks and Embedded Systems (WECON)*, pp. 1-4. IEEE, 2016.

15. Patil, Rupali, and R. G. Karandikar. "Digitization of documented signals using vertical scanning." *In 2015 International Conference on Microwave, Optical and Communication Engineering (ICMOCE)*, pp. 239-242. IEEE, 2015.

16. Rupali Patil, "Design of PID controller using Genetic Algorithm," *National Conference on "Emerging Trends in Computer, Communication and Information Technology"*, KJSCE, Mumbai, April. 21-23, 2009.

17. Rupali Patil, " Quantitative Analysis of Linear prediction algorithm" *National Conference on Information and Communication Technology organized by NYSS College of Engineering and Research*, Nagpur 23rd and 24th Dec 2010.

General Articles

18. R. Patil, A. Velingkar, M. N. Parmar, S. Khandhar, and B. Prajapati, "Machine Vision Enabled Bot for Object Tracking", *jinav j. inf. vis.*, vol. 1, no. 1, pp. 15-26, Oct. 2020.

19. R. Patil, U. Patel, and T. Sarkar, "COVID-19 cases prediction using regression and novel SSM model for non-converged countries", *J. Appl. Sci. Eng. Technol. Educ.*, vol. 3, no. 1, pp. 74-81, Aug. 2020.

Patents/Copy Rights: Nil		
No of Research / consultancy / projects completed:Rs: Nil	No of Research projects on-going: 01	No of Research projects on applied as on date: 01

Details of Research / consultancy / projects:
On-going
1. Research proposal on Machine Learning-Based Binary categorization of Oral Cancer using Orthopantomogram (OPG) images in collaboration with Department of Dentistry, K.J. Somaiya Medical College and Research Centre, Somaiya Ayurvihar. Received Ethics and Scientific approval from K.J. Somaiya Medical College and Research Centre, Somaiya Ayurvihar.
Applied
1. Research proposal on "Electromyography (EMG) controlled robotic mechanism for people with leg amputation" under CSR funding of ONGC Ltd. India. for the research funding, March 2022Sss

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    Nil

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

Attended
1. Online course on "Introduction to Statistics" by Coursera, 10th January - 7th March 2022.
2. Webinar on "DECODE: It's not only an Image!" IEEE Bombay Section WIE Affinity, organized by Department of Information Technology, KJSCE in association with IEEE Bombay Section WIE Affinity, 19th February 2022.
3. National Webinar on "Challenges, Innovations and Adaptations of Covid-19: Science & Society Perspectives" jointly organized by Department of Science & Humanities, K. J.

Somaiya College of Engineering and S K Somaiya College, Somaiya Vidyavihar University on 29th and 30th October 2021.

4. Online FDP on "IUCEE Project Management FDP for NEP 2020 Implementation", 4th-31st July 2021, Organized Indo Universal Collaboration for Engineering Education(IUCEE) conducted by Dr.Manu Vora, Business Excellence, Inc. Chicago, USA and Dr.Anil Kumar Agrawal, BHU, Varanasi

5. Attended Online Workshop on LOCF- Train the trainers Learning Outcomes based Curriculum Framework organized by, Somaiya Vidyavihar University on 22nd & 23rd April, 2021.

6. Participated in the awareness campaign on "Covid-19"Vaccination" hosted by Thakur Institute of management Studies, carrier development and Research and MKSD college in association with D-Link India limited from 11 February to April 2021.

7. CCNAv7: Switching, Routing, and Wireless Essentials, organized by Department of EXTC and Cisco Networking Academy,25-30 July 2020

8. CCNAv7: Enterprise Networking, Security, and Automation, organized by Department of EXTC and Cisco Networking Academy, 01-08August 2020

9. CCNA Routing and Switching: Introduction to Networks, organized by Department of EXTC and Cisco Networking Academy, 1st July- 5th July, 2019

10. Completed online course (20 Hrs.) on AWS Academy Cloud Foundations, 21st February 2020.

11. NPTEL FDP on "Python for Data Science" organized by IIT, Madras, 4-weeks, August-September 2019.

12. Completed online course on "Introduction to Cybersecurity" organized by Cisco Networking Academy, September 2019

Organized
1. Webinar on "Ethical Hacking and Internship opportunities" for FY-TY Engineering students by Deepcytes, Mumbai
2. Webinar on **_Metaverse: The Next Digital Dimension_** for everyone at Somaiya Vidyavihar University (SVU), in association with ISTE Teacher's chapter KJSCE, 30th April 2022.
3. Webinar on **_Recent Trends and Opportunities in the field of Networking, Telecommunication and Signal Processing_** for EXTC faculty and FY-LY EXTC students, 17th June 2021.
4. Two months Training Programme on " **_Coding Skills and basic data structures_**" was organised for EXTC Laboratory Assistants by faculty members, Prof.Baishakhi Bose, Prof Rupali P. Patil and Shilpa N.Vatkar, of Electronics & Telecommunication Engineering department during September to November 2019
5. Two days _"**Refresher course on Data structures and object oriented programming Language"**_ was organised by faculty members, Prof.Baishakhi Bose, Prof Rupali P. Patil and Shilpa N.Vatkar, of Electronics & Telecommunication Engineering department on 22nd and 23rd August 2019.
6. A workshop was organized on **"Python for Interested Learners"** Wednesday, 29th May 2019 at 2 pm to 6 pm in seminar hall B-113 for SY-TY-LY BTech.students (all branches). Total participants were more than 52. By our EXTC alumni Mr. Devang Savla--Testing and Automation Engineer at Mahindra Susten.
7. A Guest lecture was organized **"Innovation Management and Design Thinking"** on Friday 21st Sepetember, 2018 at 3:45 pm to 5.15 pm in seminar hall A 225 for LY BTech.students. by Mr. Zubin Unwalla (2012 batch alumni) from RPG Enterprises

Somaiya Vidyavihar University

	Notable Key Scholastic Achievements
1.	**Invited as Judge for Sunhacks 2022: Sandip University Nashik** (Maharashtra), 10th -12th November 2022
2.	**Invited as Session Chair** at 7th International Conference for Convergence in Technology (I2CT) in association with IEEE Bombay Section during 7th to 9th April 2022.
3.	**Invited as Session Chair** at 3rd International Conference of Emerging Technologies (INCET) 2022, technically Co-sponsored by IEEE Bangalore section in Jain College of Engineering , Belagavi ,Karnataka ,India.
4.	**Working as reviewer** at various International conferences and Journals
5.	**Approached by STEMI (Europe)** for digitization of paper ECG images captured in Helicopter Mobile Ambulance and submitted prototype software model to STEMI.
6.	**Collaboration with SIRAC** for following projects: oA statistical and deep learning-based daily infected count prediction system for COVID-19 oDigitization of ECG paper records using waveform extraction and conversion into 1D signals
7.	**Invited as External examiner** for Final year UG projects and for Mini Projects byVivekanand Education Society's Institute Of Technology, Chembur, Mumbai. May 2021, October 2021 and November 2022
8.	**Best paper award** at ICAECT-2022, Vidyalankar Institute of Technology, Mumbai, 7-8 April 2022.
9.	**As a captain of KJSCE cricket team secured 3rd Place and won Woman of the Match award** at TOSS 2022.

	Notable Positions and Responsibility
1.	Coordinator, committee for Energy Audit, Green Campus Initiative, Somaiya Vidyavihar University (SVU), since September 2023.
2.	Member of Examination Standing Committee, SVU, since 29 November 2021
3.	Member of Result and Moderation Committee, KJSCE, since November-December 2017
4.	Member of Indian Society of Technical Education, New Delhi, India, since 2009.
5.	Laboratory In-charge: Wireless Communication Laboratory from 2013 till 2021. Project Laboratory In-charge since Jan 2022.
6.	Department Examination Committee member, since July2022.

Date: 12 /02 / 2023   **Signature of Faculty Member**