Prof. Swapnil V. Tathe

Assistant Professor, Department of E&TC

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OVERVIEW

Qualifications: ME (Electronics), BE (Electronics), Gate-2010
Experience: Teaching -13 Years
Date of Joining STES: 01/12/2012
Skills and Proficiencies: Image & Signal Processing, Software Programming, Computer Vision

SIGNIFICANT ACHIEVEMENTS

- University Paper-Setter for Subject SE E&TC – Signals & Systems (2015 Pattern)
- Received project grants of Rs. 190000/- from BCUD, Savitribai Phule Pune University
- AVISHKAR 2016: Participated in Zonal Level & University Level Research Project Competition AVISHKAR held by BCUD, SPPU.
- AVISHKAR 2011: Participated in Zonal Level & University Level Research Project Competition AVISHKAR held by BCUD, SPPU.

AREA OF EXPERTISE /RESEARCH INTERESTS

- Computer Vision
- Image & Signal Processing
- Software Programming, Natural Language Processing

NUMBER OF STUDENTS GUIDED

- UG – 20+ Groups

RESEARCH PULICATIONS

Publication Summary

International Journals : 07
Conferences   : 12
h-index   : 05
i10 index   : 05

https://scholar.google.com/citations?user=0KrdthgAAAAJ&hl=en

FUNDED RESEARCH PROJECT

- Principal Investigator for Research Project on "Multimodal Surveillance System for Person Identification" funded by BCUD, SPPU, Pune, Amount Rs.1,90,000/- Year: 2014-16.

RESEARCH WORK

- **Funded Project**: Multimodal Surveillance System for Person Identification
  A surveillance system to detect, track and identify the person coming in the view of camera is proposed. People were detected in videos using Viola & Jones face detection algorithm and tracking was done using Kalman filter. Eigen Vector and Gabor filters were used for identification purposes. The system was able to detect, track & identify a person in videos.

- **PG Project**: Real-Time Human Detection and Tracking
  A computer vision system is implemented to replace manual monitoring of persons in the surrounding vicinity. A person's face was detected in videos using skin colour and Haar method. Eye region was located based on geometry of face. Kalman and Mean-Shift tracking algorithms were implemented to keep continuous track of person in video. The main objective of the research work is analysis on retina disorder analysis using fundus images of the retina of human eye with image processing algorithms. In this work, a comprehensive study on retina disorder analysis in context of diabetics and hypertension using fundus images of the retina of human eye with image processing algorithms has been presented

NOTABLE GUIDED PROJECTS

UG Projects:
- Automatic Medicine Dispenser
- IoT-based IV Infusion Control system

RESOURCE PERSON TO INDUSTRY/ACADEMIA

- Delivered Guest Lecture on *Introduction to Latex* at –
  - Dept. of IT, SKN College of Engineeering, Pune
  - Dept. of E&TC, SKN College of Engineeering, Pune
  - Marathwada Mitra Mandal's College of Engineering, Pune
  - AISSMS Institute of Information Technology, Pune
- Delivered Sessions in - *Virtual Labs: Hands-On Workshop* for the years 2020, 2021, 2022.
- Delivered Guest Lecture for the subject SE E&TC *Signals & Systems* at Pravara Rural Engineering College, Loni
- Delivered Sessions in Train the Trainer Program for the subjects TE E&TC *System Programming & Operating Systems* at SAE, Kondhwa

SUBJECTS TAUGHT

- Advanced Java Programming
- Fundamentals of Java Programming
- Javascript
- Signals & Systems
- Digital Circuits
- System Programming and Operating Systems
- Information Theory Coding & Communication Networks
- Electronic System Design
- Information Theory & Coding Techniques

FDP/STTP/SDP/WORKSHOPS ORGANIZED AS A COORDINATOR

- Workshops Organized
  - Virtual Labs: Hands-On Workshop Year-2022
  - Virtual Labs: Hands-On Workshop Year-2021
  - Virtual Labs: Hands-On Workshop Year-2020
- Organizing Member for more than 5+ events

FDP/STTP/SDP/CONFERENCES ATTENDED

- FDPs – 07+
- STTPs – 11+
- FoWs – 10+
- Workshops – 09+
- Conferences – 05+

RESPONSIBILITIES HANDLED AT STES/SCOE/DEPARTMENT

Society Level
- Organizing Member – Sinhgad Staff Sports League (SSSL) 2024-25
- Coordination Member for Faculty Interviews

Institute Level (SCOE)
- Working as VLabs Nodal Outreach/Technical Coordinator of the Institute
- Member of Career Guidance Team in Admission Counselling Cell
- Central Library Committee Member
- Organizing Committee Member for Sinhgad Staff League - 2024 (Cricket)
- Deadstock Verification Committee Member
- Member of NAAC Visit Organization Committee
- Coordinator for Prayas
- Organizing Committee Member for Graduation Ceremony
- Member of Facilitation Centre Committee for FE Admissions &
- Member of Reporting Committee of DSE Admissions

Department Level (E&TC)
- Coordinator for following Committees –
  - Faculty Feedback's
  - Faculty Appraisals
  - Academic Calendar
- NBA Criterion Coordinator
- NAAC Criterion Coordinator
- Organizing committee member for different programs –
  - Conferences – 2+
  - Workshops – 5+
- Project Guide for BE students
- Teacher Guardian for Student Batches
- Departmental Techtonic Event Coordinator –
  - Chill Zone – Marvellous
  - PCB Design Workshop

DECLARATION

I hereby declare that all the above information furnished by me are true to the best of my knowledge.

Date: /   / 2024   Signature