

ADDITIONAL PROJECTS

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- Study on metaphor-based metaheuristics to solve a multi-objective job-shop problem, in MATLAB 2017
- Comparative study on LSTM, SVR and ARIMA for short-term time-series prediction, in Python 2017
- A method for digital circlism art using mean-shift segmentation and EDT algorithm 2017
- Stereo-imaging using hierarchical segmentation and iterative cluster comparison 2016
- Servo controlled, 3D-line following robot using computer vision, with an on-board camera 2016
- Coordinate (point-to-point) navigation for holonomic robot with/without orientation lock, using IMU 2015
- Control system for holonomic robots to trace an explicit mathematical curve, using magnetometer 2015
- Stair climbing wheeled robot using pneumatic mechanism 2015
- Fuzzy logic library in C++ with generalised rule-set for navigation of wheeled robots 2015
- Comparison of PID and fuzzy controllers for flight stabilization of self-designed quadcopter 2015

ADDITIONAL EXPERIENCE (CONFERENCES/WORKSHOPS/SUMMER-SCHOOLS/COMPETITIONS)

- **NeNa 2023** Frankfurt, Germany
Project — *fnirsPy: A Sufficient, Easy, and Flexible fNIRS Preprocessing Library* Sep 2023
[poster] [picture]
- **SRISTI-UNICEF Summer School on Inclusive Innovations in Rural India** Gandhinagar, India
Project — *An Ergonomic Chula (Stove): 40% More Efficient than Traditional Wood-Based Stove* Jun 2018
- **6th Inter-IIT Tech Meet — Engineers' Conclave | 2nd Position** IIT Madras
Project — *Automation of Equatorial Mount Telescope using Stepper Motors, Raspberry Pi, and Stellarium* Jan 2018
- **5th Inter-IIT Tech Meet — Indoor Localisation** IIT Kanpur
Project — *A Wheeled Robot to Locate a Wi-Fi Beacon Based on the Received Signal Strength* March 2017
[picture]
- **Industrial Automation Workshop — Delta Electronics** Gurgaon, India
Proposal — *IIoT Warehouse Automation and Monitoring Solutions* Feb 2017
- **Techfest 2016–17 — Satellite Image-Classification | 5th Position** IIT Bombay
Project — *An SVM based classifier for Satellite Image-Classification* Dec 2016
- **Cognizance 2016 — “Cyborg Break-In” | Organizer (>200 participants)** IIT Roorkee
Designed and coordinated a center-stage automatic ground robot obstacle maze course competition Mar 2016
- **Cognizance 2015 — “Robosapiens” | 2nd Position (>50 Teams)** IIT Roorkee
Developed two wheeled robots (automatic + semi-automatic) to work in tandem to solve an obstacle course Mar 2015

