Om M Patel

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Education

- **Birla Vishvakarma Mahavidyalaya** — Anand, India
  Bachelors of Technology in Mechanical Engineering; GPA: 8.29(tillSemester7) — *June 2019 - June 2023*
- **I. B. Patel English School** — Anand, India
  Science, Mathematics Group; Percentage: 83.2 (PCM) — *June 2017 - May 2019*

Skills Summary

- **Languages**: C++, Python, Embedded C
- **Tools**: ROS, Linux, Simulink, GIT, PTC Creo, Matlab, Fusion 360

Experience

- **Space Applications Center - ISRO** — Ahmedabad, India
  Research Trainee — *December 2022 - June 2023*
  - **Projects**: 1) Development of a Close Loop Feedback Control System for Primary Wing and Secondary Mirror Deployment Mechanisms of Deployable Optical Telescope.
    2) Autonomous Control of Hexapod Mechanism.
- **MahitX Technologies pvt. ltd.** — Ahmedabad, India
  Research Trainee — *May 2022 - June 2022*
  - **Research on Building Low cost open source High Temperature 3-D Printer.** : Worked on building Heater bed for High Temperature 3-D printer especially for Ultem and PEEK printing, also worked on Marlin Firmware for open source 3-d printers.
- **IE(I) Mechanical and Production student chapter BVM** — Anand, India
  Tech and Tour Head — *Mar 2021 - September 2022*
- **The Robotics Society BVM Student Chapter** — Anand, India
  Student Member — *Oct '21 - Present*

Projects

- **Underwater Robot**: Competition based project for GUJCOST Robofest 3.0. (December '22 - Present)
- **Development of a Close Loop Feedback Control System for Primary Wing and Secondary Mirror Deployment Mechanisms of Deployable Optical Telescope.)**: Developed a control algorithm for primary wing and secondary mirror deployment mechanisms of a deployable optical telescope. In order to maximize the performance of the telescope. Worked on Embedded Linux and python along with handling the instrumentation of the system above. (December '22 - May '23)
- **Autonomous bot driving system using Deep learning**: Simulation and real-time testing of self-driving algorithm on small scaled bot was done by using computer-vision and different Machine Learning techniques such as Classification and Regression. Worked with: Python, RaspberryPi, Computer-vision.(Jun '22 - December '22)
- **Simulation of self-balancing robot in Simulink using different closed loop control system.**: This project was taken to learn simulation of robotic system in a Simulink workspace called Simscape and also in ROS(Robotic Operating System). Different closed loop control algorithm were tested for getting desired robustness in system along with stability to external forces on the two wheeled robot. (July '22 - Nov '22)
- **Design of Heating bed for a low-cost Rep-Rap High temperature 3-D Printer**: Skills gained: Ultimaker Cura, Marlin, Octoprint, Worked on Creality 3D 4.2.7 controller, IOT. (June '22)
- **Co-operative Drones**: The soul purpose of this project was to learn about drone design, its calculations, electronics and using different control algorithms(for example: PD, PID ...) and making them co-operate with each other with the help of a rigid support between them. (Jan '22 - June '22)

Honors and Awards

- Got selected for the Internship at ISRO
- Got selected for the 2nd Round of GUJCOST ROBOFEST 3.0 against 1000 teams.
- Won Badminton singles and doubles at college's Sports fest.