

EDUCATION

M.S in Robotics, Oregon State University (OSU) - GPA: 3.8/4 Sep'18 - Ongoing
Indian Institute of Technology, Kanpur (IITK) - GPA: 8.3/10 Kanpur, India

TECHNICAL STRENGTHS

Programming Languages C, C++, MATLAB, Python, R, PostgreSQL
Softwares & Libraries PyTorch, ROS, OPENCV, Arduino, AutoDesk Inventor, MS Excel

RELEVANT COURSES

Academic Deep Learning, Probabilistic Mobile Robotics, Sequential Decision Making,
Autonomous & MultiAgent Systems, Computer Vision, Introduction to Robotics
Coursera Algorithms(I & II), Machine Learning, Robotics Specialisation(Perception, Mobility, Aerial)

RESEARCH PROJECTS

Graduate Research Assistant, Oregon State University Oct'18 - Ongoing
Guide: Prof. Cindy Grimm & Prof. Ravi Balasubramanian, OSU

- Researching robust 6D Object Pose Estimation for robotic grasping, in cluttered and occluded scenes.
- Developing surface anomaly detection system using computer vision for a major industrial manufacturer.

SLAM in Reduced Vision Jan'16 - Apr'16
Guide: Prof. Gaurav Pandey, Department of Electrical Engineering, IITK

- Improved mapping in environment with fog and smoke using Single Image Dehazing with ORB Slam.
- Tested results using TUM RGB-D fr1/desk dataset and achieved 4.5 times improvement in keyframe selection.

Autonomous Ground Vehicle (AGV) Navigation in Orchards May'15 - Jul'15
Guide: Dr. Vason Srinii, Executive Director, DataFlux Systems Inc., Berkeley, CA

- Designed an image processing pipeline to generate a navigation plan around a orchard using GoogleEarth image
- Implemented Canny Edge Detection, object classification and noise filtration and achieved 95% accuracy.

ABU ROBOCON : ASIAN OCEANIAN ROBOTICS COMPETITION

Robocon 2015 - Badminton Playing Robots Oct'14 - Mar'15

- Automated robots using OPENCV for shuttle detection and extended Kalman Filter for trajectory prediction.
- *Results:* Accurately predicted the landing point of incoming shuttle in real time with an error margin of 5-7 cm.

Robocon 2014 - Autonomous Pole Walking Robot Oct'13 - Mar'14

- Developed a manual robot with holonomic motion and an autonomous robot capable of vertical pole traversal.
- *Results:* Secured 6th place in the National Competition and bagged the award for Best Innovative Design.

PROFESSIONAL EXPERIENCE

Data Scientist, OYO Rooms (India's Largest Hotel Chain) India, Jul'17 - Jul'18

- Devised algorithm based on occupancy prediction & current booking trend for dynamic pricing of 2500+ hotels.
- Implemented K-means clustering and non linear regression to identify days of peak demand for each city.

Business Analyst, Fastfox.com (Rental Service Provider) India, Sep'16 - Jun'17

- Performed in-depth diagnostic studies and studied app usage patterns and user engagement levels.

LEADERSHIP EXPERIENCE

- Head, Science and Technology Council, IIT Kanpur Apr'15 - Mar'16
- Team Leader, ABU Robocon 2015 - IIT Kanpur Oct'14 - Mar'15