

PARESH R. CHAUDHARY

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EDUCATION

University of Washington

Master of Science in Electrical and Computer Engineering — GPA 3.89/4.0
Advisors - Natasha Jaques, Joshua Smith

Seattle, Washington
Sept. 2022 – August 2024

MIT World Peace University

Bachelor of Technology in Electronics and Communication Engineering — GPA 8.17/10
Advisor - Dr. Saket Yeolekar

Pune, India
July 2017 – June 2021

PUBLICATIONS

- [4] **Chaudhary, P.***, Li M.*, Sontakke S., Gupta, A., Jaques, N. Adversarial Environment Generation for Robust Robotic Manipulation. (*CORL 2026*) (*In preparation*)
- [3] **Chaudhary, P.**, Liang, Y., Chen, D., Du, S. S., Jaques, N. Improving human-AI coordination through adversarial training and generative models. *The Fourteenth International Conference on Learning Representations (ICLR 2026)* (Score 8, 8, 6) [[paper](#)]
- [2] Chae, A., Liu, I. Y-H., Ibarra, K. O., Hernandez, M., **Chaudhary, P. R.**, Zhong, Z., & Guo, Z. (2023). *Machine Learning for Smart Space-Based Radiation and X-Ray Spectrometer Instruments (Poster)*. NASA Jet Propulsion Laboratory.
- [1] **Chaudhary, P.**, Joshi, N. V., Paranjape, R., & Jadhav, P. (2021). *An Efficient System to Quantify Error in Sensor Fusion for Cameras in ADAS*. IEEE 2021 International Conference on Smart Generation Computing, Communication and Networking

* equal contribution.

WORK & RESEARCH EXPERIENCE

Research Scientist | SocialRL Lab, UW

Paul G. Allen Center for Computer Science & Engineering

Seattle, WA

Sept 2024 – Present

- Working on adversarial environment generation for robust long-horizon robotic manipulation.
- Led zero-shot human-AI coordination research using generative models in an online adversarial training loop to train the Cooperative agent against difficult coordination scenarios while maintaining realistic behavior.

Graduate Student Researcher | Sensor Systems Lab, UW

Dept. of Electrical & Computer Engineering

Seattle, WA

Jan 2023 - August 2024

- Developed reinforcement learning models for autonomous RC cars that improved generalization to unseen challenging scenarios.
- Helped build, maintain, and upgrade the software (OS, ROS, core libraries) and hardware (Jetson, Lidar, IMU, Motor control, Joystick) stack for the 27 open-source MuSHR f1/10th RC cars for the self-driving cars course and mobile robotics research.

Graduate Student Researcher | NASA Jet Propulsion Laboratory

University of Washington

Seattle, WA

Jan 2023 – June 2023

- Led machine learning research to autonomously calibrate and process radioactive time-series data from a radiation sensor and an X-ray spectrometer.
- Conducted data collection within a controlled space environment using the radioactive payload.

Research Intern | Technology Group

Automotive Research Association of India (ARAI)

Pune, India

Oct 2020 – June 2021

- Created a robust driver package to ensure the timely gathering of data packets from cameras and ultrasonic sensors on an electric car.
- Innovated algorithms to optimize stereo depth measurement, significantly reducing errors in sensor fusion.

Co-Founder & Engineering Lead

Blue Zone Labs

Pune, India

December 2020 – Feb 2022

- Co-founded a preventive health care startup, envisioning seamless integration of health tracking into human lifestyle.
- Conceptualized, designed, and prototyped a proof-of-concept health device utilizing breath biomarkers to provide personalized health insights.
- Developed various bench test prototypes for sensing and detecting biomarkers using low-power SOC and optical sensors.

Robotics Engineer/Team Captain | (MIT-WPU Robotics Lab)

MIT, Pune

Pune, India

September 2017 – December 2020

- Led the team to victory at the National Robocon event and represented the Indian team internationally in Fiji.
- Managed a budget of **USD 22,000 funds** for Robocon 2020, driving innovation in trajectory planning and robotic mechanisms.
- Designed BLDC motion control hardware & software and trajectory planning, & filtering algorithms for a bipedal robot used in Robocon 2019.
- Finished rank 2/105 in the Robocon 2018 and designed and implemented holonomic robot motion control solutions.

AWARDS

Prof. Balakrishnan Memorial Award, ABU Robocon 2020 Rank 1 out of 110	2020
Texas Instruments Innovation Challenge 2019 Semi-Finalist (TOP 1%)	2019
National Runner Up, ABU Robocon 2018 Rank 2 out of 105	2018
SSC Scholarship Awarded for academic excellence in SSC Board Examination	2015

SERVICE & OUTREACH

Teaching Assistant <i>EEP 547 - Linear Systems Theory, Spring 2024</i>	Seattle
Teaching Assistant <i>EEP 545 - The Self Driving Car: Introduction to Mobile Robots, Fall 2023</i>	Seattle
Workshop Organizer <i>Build, program and run your own robot workshop, Spring 2018</i>	Pune, India

SKILLS

Programming Languages: Python, C, C++, Matlab, SQL, LaTeX, Shell Script

Machine Learning Libraries: PyTorch, JAX, TensorFlow, Keras, Huggingface, Transformers, Langchain, Scikit-Learn

Other Software Libraries: Numpy, OpenCV, SciPy, Matplotlib, Pandas, Beautifulsoup, Selenium

Technologies: Docker, VMWare, Microsoft Azure, Amazon SageMaker, GitHub, Gitlab, Linux, Ubuntu, Pinecone, Google Vertex