

Abhay Deshpande (He/Him)

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EDUCATION

University of Washington

BS in Computer Science and BA in Math

GPA: 3.98/4.0

Completed graduate-level coursework in Machine Learning, Reinforcement Learning, and Robotics

Seattle, WA

June 2024

WORK EXPERIENCE

NASA Jet Propulsion Labs

Robotics Software Engineering Intern

Seattle, WA
June 2023 – September 2023

- Built and maintained tools that supported the planning process for the Curiosity rover
- Automated target evaluations and safety checks for the rover's arm, speeding up planning process by >10x

Meta

Software Engineering Intern

Seattle, WA
June 2022 – September 2022

- Worked on the AI Security team, coordinating with other engineers to control access to business-critical AI assets
- Used C++ and Python to implement a Cython client for key service in AI infrastructure, handling ~20K QPS
- Created internal tools in React and a PHP backend that enabled more flexibility and insight into security controls

Personal Robotics Lab @ UW

Undergraduate Researcher

Seattle, WA
June 2021 – September 2021, April 2022 – Present

- Submitted 2 research papers to top robotics conferences as a co-author
 - "Cherry Picking with Reinforcement Learning", RSS 2023.
 - "CCIL: Corrective Imitation Learning by Continuity-based Augmentation", Preprint.
- Extensively reviewed scientific literature, building wide base of experience within the field of robotics research
- Performed research in applying learning to robotics for multiple tasks, including fine motor manipulation

PROJECTS

Husky Robotics Team @ UW

Software Lead

Seattle, WA
October 2020 – Present

- Leader of the software subsystem, developing for the [URC](#) and [CIRC](#) rover challenges
- Led team of programmers and worked with other leads to accomplish long-term goals, finishing 2nd in CIRC 2022
- Substantially improved existing codebase, leading to >3x increase in unit tests and better code quality
- Reduced estimate error by 40% by implementing pose estimation algorithms like Extended Kalman Filtering
- Implemented sophisticated control solvers, greatly expanding the rover's manipulation capabilities

Hackathons

Software Developer

Seattle, WA
2020 – Present

- Won 1st place in Hack'20. Built an Android app that enables users to avoid dense crowds during COVID-19
- Finalist in DubHacks 2020. Created a webapp that helps users be aware of news bias and diversify their sources
- Other projects include a desktop program to allow mute people to participate in video conferencing, and an Android app that uses statistics to identify easy-to-miss food sensitivities

Selected Personal Projects

Software Developer

Bellevue, WA
2016 - Present

- Created a CNC whiteboard robot from scratch, using CAD to design the parts and 3D-printing them. Powered by an Arduino Uno, with desktop code written in Java communicating with embedded code written in C++.
- Designed, developed, and marketed "Sailors of Steel", an open-world naval computer game written in C# with Unity3D, which sold 1900+ copies and was greenlit onto the Steam marketplace.

ADDITIONAL INFORMATION

Languages

- Python
- C++
- Java
- JavaScript/TypeScript

Technologies/Frameworks

- React
- PyTorch
- Unity3D
- Google Cloud
- AWS
- Android