Arnav Thareja

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Education

University of Washington — Expected June 2024
Master of Science, Computer Science — *Seattle, WA*

Coursework: Machine Learning, Deep Learning, Reinforcement Learning, Deep Robotic Learning

University of Washington — Expected December 2023
Bachelor of Science, Computer Science and Mathematics | GPA: 3.95 — *Seattle, WA*

Coursework: Algorithms, Robotics, Computer Vision, Databases, Systems Programming, Optimization, Probability

Experience

Databricks — June 2023 – September 2023
Software Engineer Intern — *Bellevue, WA*

- Working on infrastructure to enable performance benchmarking across Databricks products
- Extended internal benchmarking framework to support a suite of profiling options for integrated profiler
- Buliding an internal tool to simplify profiler result access, visualization, and comparison

Personal Robotics Lab — May 2021 – Present
Undergraduate Researcher — *Seattle, WA*

- Working on multi-agent autonomous navigation and task allocation with MuSHR cars
- Created an open-source architecture for completing pushing-based manipulation tasks with multiple non-holonomic robots
- Designed and built motion planning algorithms for non-holonomic multi-agent navigation and task allocation in C++
- Extended and tuned model predictive control for the multi-agent domain to eliminate collisions and improve robustness
- Built ROS (Robot Operating System) wrappers around algorithms to enable easy interfacing with existing systems
- Sped up robot trajectory comparison framework by 50x by directly analyzing ROS bags through the rosbag Python API
- Demonstrated and tested system capabilities and translation to real-world environments on physical robots

University of Washington — March 2023 – June 2023
Teaching Assistant — *Seattle, WA*

- Led lab sections and lab office hours for CSE 478: Autonomous Robotics
- Assisted students with conceptual robotics questions and robot software and hardware issues

Oracle Cloud Infrastructure — June 2022 – September 2022
Software Engineer Intern — *Seattle, WA*

- Worked as a part of the Virtual Machines Efficiency team within Oracle Cloud Infrastructure (OCI) Compute
- Designed and built a system to monitor usage of reserved compute resources and identify resources to be reclaimed
- Defined an actionable implementation strategy to address and fulfill system requirements
- Created internal usage metrics, dashboards, and alarms using Java and Oracle Monitoring Query Language (MQL)

Projects

Angles | *DubHacks 2020 – Newsprint Track Finalist (Top 3 out of 70+ Projects)* — *devpost.com/software/angles-sqdzlt*

- Developed a Chrome Extension that suggests news articles of opposite bias when a news website is visited
- Leveraged Google Cloud NLP with JavaScript to extract keywords from news articles to use in our opposite bias algorithm
- Selected as a finalist in the Newsprint track and recognized as one of the top 3 projects out of over 70 projects

Yearbook 2020 | *Personal Project* — *yearbook-hhs.web.app*

- Designed and developed a web application for students and graduates to sign yearbooks virtually during COVID-19
- Utilized JavaScript, HTML, CSS, and Google Firebase for user authentication, cloud storage, and NoSQL database

Skills

Languages Java, C++, Python, Scala, C, JavaScript, HTML, CSS, SQL
Tools NumPy, PyTorch, ROS (Robot Operating System), React, Docker, Linux, CMake, Git