Rohan Pandey

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Skills

Languages Python, Java, SQL, C++, MATLAB, Mathematica

Libraries/Tools NumPy, Pandas, Scikit-learn, Tensorflow, Pytorch, Azure Databases

Work Experience

NASA

May 2024 - August 2024

Project Manager Intern — *Bellevue, WA*

- Contributed to the L'SPACE Lucy and Artemis missions, focusing on robotic surface reconnaissance.
- Leading a team of 11 to develop a robotic lunar ice mapping system for the South Pole's Permanently Shadowed Regions.
- Oversaw a $225 million budget for the comprehensive design and planning process, including engineering, programmatics, and outreach.
- Coordinated efforts for a Preliminary Design Review, ensuring project milestones were met.
- Technology used: NX CAD

University of Washington

April 2023 - Present

Research Intern — *Seattle, WA*

- Conducting research with Dr. Konstantinos Mamis on combinatorics and moments of normal distribution
- Investigating the theory of Gaussian processes with applications in stochastic dynamical systems for epidemiology and cancer modeling
- Analyzing extensions of Stein's Lemma and performing complex matrix manipulations and intense statistical algorithm modeling and calculations
- Technologies used: Python, Mathematica, Matlab

Society of Advanced Rocket Propulsion

October 2022 - June 2024

Lead Engineer — *Seattle, WA*

- Engineered the Autonomous Recovery Electronics System (ARES) for precision GPS-guided rocket recovery, successfully demonstrated at Spaceport America Cup 2024
- Implemented autonomous drogue parachute deployment for descent control from 15K feet.
- Directed the development of a fail-safe code recovery mechanism to mitigate system failures
- Constructed a live data transmission system with a real-time 3D flight model using Blender and GPS telemetry
- Conducted rigorous flight path analysis and algorithm design using C++ and Python, integrating Arduino for load cell data acquisition
- Technologies used: C++, Python

Selected Projects

Scikit-learn Contributor

Python

- One of my projects for this summer is contributing to scikit-learn, focusing mostly on issues related to improving the implementation and efficiency of ensemble learning methods. With a focus towards Gradient Boosting. I'm interested in advancing the field of Machine Learning by enhancing popular open-source tools.

Research Rover

Python, HTML, CSS, Flask — *June 2024*

- Used CrewAI and Llama 3 to make an innovative tool designed to assist users in their research endeavors by providing targeted research topics, links to research papers, and summaries of relevant models and statistics.
- Demo **here**

MindTunes - NeuroAI Hackathon

Python, HTML — *March 2024*

- Third place winner at UW's NeuroAI Hackathon 2024.

Education

University of Washington

Seattle, WA

B.S. in Applied and Computational Mathematical Sciences - Scientific Computing and Numerical Analysis — *Expected Graduation: December 2025*

- Relevant Coursework: Data Structures and Algorithms, Machine Learning, Data Science, Database Systems, Scientific Computing, Linear Algebra and Numerical Analysis, Chaos Theory and Dynamical Systems, Discrete and Continuous Mathematical Modeling, Vector Calculus, Real Analysis
- **President** of the INIT Chapter opening at UW. A community helping students land a job in tech through technical programs, career development, access to opportunities, and more. Partnerships with Microsoft, the Knight Foundation, Venture Miami, and Lab22c.
- **President** of NASA Space Grant club. Working with $3k+ budget to plan and host career building opportunities and events such as Talent Recruitment, Resume workshops, and outreach events with local Space organizations and museums.
- **Neuroscience AI Course Lead**. Working on developing a Neuroscience and AI incorporated course at the I2 club at UW. Partnering with the Allen Institute based in Seattle.