Yash Jain

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EXPERIENCE

Space and Atmospheric Instrumentation Lab at Embry Riddle Aeronautical University **March 2023 – Oct 2024**

Software Engineering Intern *Daytona, FL - Remote*

- Developed a program to parse and plot live telemetry data from rockets on the SEED research mission funded by NASA
- Delivered a versatile program that exceeded original expectations and could be adjusted for multiple programs
- Used socketing with bitmasking and NumPy in order to receive asynchronous packets at speeds of 100,000 packets/min
- Implemented plotting with PyQT, VisPy, and OpenGL to plot the data at 10 Hz

Waterloo Rocketry **Sept 2025 – Present**

Software Team *Waterloo, ON*

- Contributed towards the software of a rocket which competes in the Launch Canada competition
- Implemented Pydantic models to create a more robust messaging system between dashboard and rocket
- Migrating legacy backend systems from Python to TypeScript to enhance performance/maintainability.
- Designed and validated tests for the parsing of the RocketCAN protocol using PyTest

Salish Robotics Team **Sept 2022 – Jun 2025**

Team Captain and Programmer *Vancouver, BC*

- Led a top-performing robotics team through multiple tournaments, coordinating design cycles, and programming.
- Implemented tasks such as Pure Pursuit and PID using C++ for autonomous routines
- Prototyped CAD models for the team through OnShape
- Received multiple league awards for which we earned multiple team awards

PROJECTS

Competitive Programming

- Developed strong problem-solving skills in algorithms, data structures, and optimization under time constraints.
- Reached Gold in the USA Computing Olympiad and top 5% globally on codeforces

Wunder Challenge

- Implemented an LSTM model with PyTorch to predict time sequence data.
- Learned basics of ml models: hyperparameter tuning, cell states, and layers in LSTM models

EDUCATION

University of Waterloo

Candidate for Bachelor of Software Engineering

- Engineering Ambassador and Duke of Edinburgh Silver Award
- Programmer for the Electriumap project, a crowd-sourced map to help users find electric charging spots
- Relevant Coursework: SE 101 (**SQL** databases, linux environments, Git) and CS 137 (Data Structures and Algorithms)

SKILLS

Languages: Python, C, C++, MATLAB, SQL, Java, Typescript, React, HTML, CSS

Frameworks & Libraries: NumPy, PyQt, VisPy, Matplotlib, Pandas, PyTest, OpenPyxl, PyTorch

Tools: Git, Gitlab, Jupyter notebook, Excel, Github pages, OpenGL, Cloudflare pages, LaTeX, OnShape