

Yash Jain

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EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Software Engineering, CGPA: 3.9/4.0

- USA Computing Olympiad Gold, Engineering Ambassador

EXPERIENCE

Applied Research Engineering Intern

May 2026 – Present

LlamaIndex

San Francisco, CA

- Built a two-pass VLM document classifier to measure what document types and features customers parse through LlamaCloud, producing aggregate insights previously unobtainable under its zero-data-retention policy
- Raised classifier F1 from 0.79 to 0.94 through architecture and model-selection experiments on a hand-labeled 103-document benchmark, the only accuracy signal since customer documents cannot be inspected, then shipped a model matching frontier accuracy at ~50x lower cost with 57% cheaper inputs via prompt caching
- Expanded the benchmark 2.2x with an LLM-as-judge ensemble of three reasoning models reaching consensus on 95% of labels at 0.985 F1 against human-verified ground truth, sending disagreements to human review
- Shipped the classifier as a daily Temporal workflow sampling live parse jobs (cost ceilings, kill switch, Prometheus), revealing that the internal parse benchmark under-represented the forms and tables dominating production

Software Developer

Sep 2025 – Jan 2026

Waterloo Rocketry

Waterloo, ON

- Developed a real-time network bridge to transmit live rocket telemetry to ground control dashboards, integrating a type-safe serialization protocol using Pydantic to validate 30+ sensor fields and eliminate malformed packets
- Created a pre-competition confidence check using Pytest, achieving 90% code coverage for message parsing, which was also used to identify three deprecated protocols in the codebase

Software Research Assistant

Jun 2023 – Aug 2024

Space and Atmospheric Instrumentation Lab at Embry Riddle Aeronautical University

Daytona, FL - Remote

- Built a telemetry engine for NASA's VortEx sounding-rocket mission, using non-blocking sockets to handle live asynchronous UDP streams, preventing UI lockups and data loss during network drops
- Engineered a noise-resilient sensor parsing pipeline by implementing NumPy cross-correlation to dynamically identify sync frames and recover fragmented packets from raw byte streams
- Increased rendering performance by 4x over a legacy MATLAB system by implementing an OpenGL-backed visualization layer (VisPy) for continuous time-series plotting

Team Captain and Programmer

Sep 2022 – Jun 2025

Salish Robotics Team

Vancouver, BC

- Trained autonomous navigation routines in C++ by implementing PID controllers for precision steering and Pure Pursuit for smooth path-tracking, optimizing for consistency during competition
- Secured the Judges and Create awards by implementing iterative testing protocols to resolve mechanical failures

PROJECTS

Wunder Challenge | PyTorch, ONNX, Pandas

- Trained an LSTM model to forecast high-frequency time-series data from rolling windows of historical events
- Sped up live predictions by exporting the model to ONNX Runtime and writing a custom script to manage sequence padding and rolling memory histories

TECHNICAL SKILLS

Languages: Python, C, C++, Java, TypeScript/JavaScript, SQL, MATLAB, Bash, Verilog

Technologies: PyTorch, NumPy, Pandas, ONNX, LLM APIs (Anthropic, OpenAI, Gemini), Temporal, React, Node.js, Flask, PostgreSQL, PyTest

Developer Tools: Git, Docker, Prometheus, PostHog, Linux systems