Aditya Gandhi

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Education

Purdue University, West Lafayette **August 2023 – May 2027**
Bachelor of Science (B.S.) in **Computer Science Honors** GPA: 3.0/4.0
Concentrations: Software Engineering, Machine Intelligence; Minor in Mathematics
Relevant Coursework: Analysis of Algorithms, Data Structures & Algorithms, Data Mining & ML, Systems Programming, AI, Object-Oriented Programming, Statistical Methods, Competitive Programming, Robotics.
Activities: Teaching Assistant (Analysis of Algorithms), Organizer for Hello World (Purdue's biggest Hackathon)
Achievements: Alpha Lambda Delta Phi Eta Sigma (National Honor Society), Dean's List

Experience

Retailmind June 2025 – August 2025
Software Engineering Intern (Distributed Systems) | Forecasting, Prophet, Autogluon

- Architected a distributed, multithreaded backend processing data across **4,500+ store–department entities**.
- Built a low-latency hierarchical forecasting service achieving **sub-300ms inference latency**.
- Designed asynchronous pipelines to maintain availability under heavy compute and peak load.
- Implemented causal inference using **vector search** and **Sentence-Transformers** for sales anomaly analysis.

Indegene June 2024 – August 2024
Software Engineering Intern (Systems) | Python, RAG, NLP, OpenAI KA, India

- Built a content automation pipeline transforming structured Excel data into generated news articles.
- Developed a **RAG-based microservice** to analyze large regulatory documents for compliance review.

Duality Lab February 2026 – Present
Undergraduate Researcher (ML Systems) Purdue University

- Leading a team of 5 to develop a cost-constrained coding agent runtime.
- Building on OpenSWE to create an agent with token usage, latency, and reliability as first-class constraints.

Privacy-Preserving Machine Learning Lab August 2025 – December 2025
Undergraduate Researcher (ML Systems) | PyTorch, TensorFlow, HPC Cluster Purdue University

- Optimized and benchmarked ML pipelines using interpretability methods (LIME, Conformal OOD).

Projects

HypeTrade | GCP Cloud Run, Redis, CI/CD, FinBERT, React, DevOps

- Architected a high-availability backend for a stock sentiment analysis website on **GCP Cloud Run** with **99% uptime** and **sub-300ms latency**.
- Implemented CI/CD pipelines reducing deployment time by **90%**.
- Built a **FinBERT sentiment pipeline** with dynamic batching, reducing inference cost by **56%**.
- Led sprints and **DevOps** practices as **Scrum Master** for a cross-functional team of 6.
- Selected for Firestarter, Purdue's premier pre-incubator.

Systems Programming (Compiler & Shell) | C, C++, Lex/Yacc, x86 Assembly, Linux

- Implemented a **C-to-x86 compiler** using Lex/Yacc supporting control flow and memory allocation.
- Built a **Unix-like shell** with pipelines, I/O redirection, and robust signal handling on Linux.

Technical Skills

Languages: C++, Python, Java, C, SQL, TypeScript, JavaScript, x86 Assembly, C#, HTML/CSS, Bash
Systems & Infrastructure: Docker, GCP, Redis, CI/CD, Git, Linux, REST APIs, Kubernetes, Ansible, Jenkins
Frameworks & Tools: React, Vite, Node.js, LangChain, Flask, HuggingFace, Pandas, NumPy, Scikit-Learn, LaTeX