Aaryan D. Wadhwani

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Education

Purdue University (West Lafayette, IN) | **GPA: 3.93/4.00** | **Dean's List** Aug 2023 - May 2027
B.S. Computer Science & B.S. Artificial Intelligence | *Minor: Mathematics* | *Certificate: Applications in Data Science*

Experience

Undergraduate Data Scientist Aug 2025 - May 2026
Microsoft *West Lafayette, IN*
- Prototyped AI-powered data science pipelines to transform publicly available Minecraft creator datasets into insights on content trends, engagement drivers, and community influence.
- Engineered lightweight ML/NLP tools to help new creators generate and classify content ideas, lowering entry barriers and enabling rapid experimentation in the Minecraft creator ecosystem.

Project Manager - ManglarIA Aug 2025 - May 2026
World Wildlife Fund *West Lafayette, IN*
- Mentored 10+ students applying Python, ML, and Google Cloud tools to analyze data from mangrove ecosystems.
- Coordinated bi-weekly plans using agile practices to define deliverables, track progress, and ensure execution.

Undergraduate Teaching Assistant Aug 2025 - Dec 2025
Purdue University - CS 251 (DSA), CS 253 (DSA for DS/AI Majors) *West Lafayette, IN*
- Authored project specifications, grading rubrics, and instructional resources to improve coursework.
- Facilitated 800+ students in mastering core data structures (trees, graphs, heaps, hashmaps) through PSO sessions, office hours, and hands-on guidance, along with grading over 200+ assignments all on a weekly basis.

Software Engineering Intern May 2025 - Aug 2025
Uniloy Inc. *Tecumseh, MI*
- Developed an internal issue-tracking journal and incorporated a fully local RAG pipeline (FAISS, MiniLM, Ollama) to accelerate troubleshooting and reduce repeat queries.
- Automated global translation setup with Python scripts, cutting localization effort by over 65%.
- Implemented a lightweight server to enable live communication ($\sim$ 0.1s) between incompatible control systems.

Undergraduate Research Assistant - AVL Fast-Hash Oct 2024 - May 2025
Purdue University *West Lafayette, IN*
- Optimized a cache-aware AVL tree achieving 1.3×–2.1× speedups and memory usage over standard C++ implementations on benchmarks with over 500 000 keys using modern computer architecture.
- Created a Google Benchmark micro-suite to compare against Java HashMap, V8 Dictionary, and others.
- Integrated AVL-based buckets into hash tables (AVL Fast-Hash) guaranteeing worst case $O(logn)$ operations.

Data Engineering Intern May 2024 - Aug 2024
LTIMindtree Ltd. *Mumbai, India*
- Deployed Redis-backed caching layer for SharePoint search, cutting median latency 28% for $\sim$ 2k daily users.
- Introduced CI workflows with GitHub Actions, cutting post-merge defects by 35% and accelerating deployment.

Undergraduate Data Scientist Aug 2023 - May 2024
Caterpillar Inc. *West Lafayette, IN*
- Scraped, cleaned, and joined over 60 years of global supply-chain data (2,000,000x40 entries) on 7+ key indicators.
- Trained PyCaret + Prophet pipeline approximating project related risks based on this 60-year series.
- Delivered an interactive PowerBI dashboard delivering live data, and real-time feedback about supply chain issues.

Projects

StockSage AI | Python, TensorFlow/Keras, scikit-learn, Prophet, NLTK/TextBlob Mar 2025 - Jul 2025
- Built an ensemble forecasting pipeline (LSTM, XGBoost, ARIMA) with 10+ indicators (e.g. RSI, MACD, Bollinger Bands), achieving 89.5% accuracy, and 5% above the best single model.
- Incorporated live sentiment scoring (NLTK/TextBlob) using NewsAPI, boosting model performance by 30%.

Systems Projects | C, C++, Bash, Flex, Bison Sept 2024 - Apr 2025
- **POSIX Shell**: implemented job control, pipelines, background execution, subshells, wildcard expansion, tab completion, and command history; passed 78 unit tests with 100 % success.
- **Simple-C Compiler**: parses C code, and generates optimized x86-64 Assembly while achieving times 5-15% faster than GCC and Clang.

Technical Skills

Languages: C++ · C · Python · Java · JavaScript/TypeScript · Bash · x86-64 Assembly
Frameworks & Libraries: React · Node.js/Express · FastAPI · Streamlit · PyTorch · scikit-learn · PyCaret · Prophet
Data & ML Tools: Pandas · XGBoost · Tableau · SQL · MongoDB · Redis