Aditya Parthiban

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SUMMARY

Computer Science and Engineering student with experience in distributed and high-performance systems. Strong Python and algorithms background. Built production-grade, data-driven analytical tools used in live equity research. Focused on reliable, efficient software..

EDUCATION

NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY *Bengaluru, KA*
(B.E) Bachelor of Engineering in Computer Science & Engineering *Dec 2022 – 2026*

- ***Relevant Coursework:*** Object Oriented Programming, Data Structures & Algorithms, Database Management System, Quantum Computing, Python (pandas, numpy, matplot, seaborn), C Language, Java, SQL, Agile Methodologies.

WORK EXPERIENCE

SOFTWARE ENGINEERING INTERN, PRATT & WHITNEY *Bengaluru, Onsite*
Jan 2026 – Present

- Driving improvements to data acquisition and reporting workflows, **reducing turnaround time** and supporting a **15-minute service-level target** for delivering complete flight data reports to end clients.
- Partnering closely with Pratt & Whitney Canada stakeholders to translate business requirements into **clear, executable objectives**, ensuring delivery meets **reliability, quality, and safety standards** for mission-critical systems.

QUANTITATIVE RESEARCH INTERN, WRIGHT RESEARCH *Mumbai, Remote*
Feb – July 2025

- Developed a **Python** based quantitative stock selection pipeline analyzing **1,500+ equities**, improving portfolio returns by **~10%** through systematic identification of high-potential stocks.
- Developed a **REST API** using **FastAPI** to interface and serve key data points from the pipeline, reducing data retrieval time by **~70%** and enabling efficient access for real-time quantitative research and analysis.
- Designed and implemented efficient **SQL**-based storage for pipeline-generated metrics (**~5M+ records**), ensuring **<1s** query response and seamless downstream access for analysis and evaluation.

PROJECTS

Current Research - *High-Performance Vector Search & FAISS Optimization*

- Designing and benchmarking a hybrid **ANN retrieval framework** using **FAISS** (IVF-PQ + HNSW refinement) to reduce p99 query latency on 10M+ high-dimensional embeddings.
- Implemented custom routing + adaptive probing to optimize recall–latency tradeoffs, achieving lower query overhead under varying load conditions.

Team Arion *(Formula Student Team)* **- Team Mentor & Software Engineering Team Lead**

- Transitioned from Team Manager to Team Mentor for *Formula Student Team Arion*, guiding engineering, data, and simulation initiatives across subsystems while supporting leadership in strategic and technical decision-making
- Founded and currently lead the **Software Engineering Subsystem**, managing a team of four to develop internal tools including an inventory management platform and an ongoing project to host SolidWorks on **AWS** for accelerated simulation cycles.

COMPETITIONS & PROGRAMMES

- **Enigma Business Marathon - E-Cell NMIT (2023):** Winner
- **IIM Bangalore Young Leaders Summit (2023):** Delegate
- **Amazon ML Challenge (2024):** Ranked ~950 / 20,000+ teams
- **Harvard HPAIR Conference (2024):** Selected as one of 350 global delegates from over 50,000 applicants; presented a live strategy case to Patagonia's CMO on sustainable brand and product growth
- **IMC Prosperity Trading Simulation Challenge (2024):** Ranked ~300 / 12,000+ teams
- **Amazon ML Challenge (2025):** Ranked ~120 / 20,000+ teams

SKILLS & ADDITIONAL

- **Technologies:** Python, C++, FastAPI, React, Docker, AWS, PostgreSQL
- **Core Skills:** Algorithms, System Design, APIs, Databases, Machine Learning
- **Project Management:** Agile Methodology, Scrum, Jira, Slack, Git/GitHub
- **Languages:** Fluent in English, Kannada, Tamil, Malayalam; Conversational Proficiency in Hindi