

SWAYAM MEHTA

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EDUCATION

MS Computer Science	Expected May 2026
Arizona State University	4.0 GPA
BTech Computer Science and Engineering	2020 - 2024
Vellore Institute of Technology	8.65 CGPA

SKILLS

Programming	Java, Kotlin, Python, HTML, CSS, JavaScript, SQL, C++
Frameworks/Libraries	Flask, NextJS, ReactJS, D3.js, REST, Pandas, Numpy
Tools/Technologies	Linux, Git, MySQL, MongoDB, AWS, Kubernetes, Prometheus, Grafana, Falco

EXPERIENCE

Vellore Institute of Technology: Research Intern	01/2024 - 05/2024
<ul style="list-style-type: none">Enhanced GAN-based stock price prediction models by integrating additional market indices and technical indicators, achieving a 40.21% reduction in RMSE over previous research baselines.Built a web app featuring Prophet forecasting, sentiment analysis, and a Gemini-powered chatbot. Demonstrated through COVID-19 market analysis that LSTM/GRU outperform GANs in highly volatile conditions.	
Hewlett Packard Enterprise: CTY Intern - High Performance Computing	01/2023 - 06/2023
<ul style="list-style-type: none">Integrated 5 modular Kubernetes security tools (static analysis, compliance, threat detection, runtime security), automating vulnerability management and improving cluster security posture by 30%.Deployed Falco with Prometheus and Grafana to simulate 150+ malicious events, building a real-time monitoring dashboard that reduced incident detection and response times by 40%.	

PROJECTS

cmd Play [ReactJS, Vite, TypeScript, Shell]	Spring 2025
<ul style="list-style-type: none">Engineered and deployed a gamified educational platform within 24 hours to enhance middle-schoolers' understanding of basic programming, cybersecurity and SQL; awarded 1st place at Innovation Hacks'25.Scaled game logic and difficulty dynamically using custom state machines with AI-driven content generation. Optimized cross-browser UX with <1s load time and implemented port-based parallel game hosting.	
LLM-Assisted FMEA in SMT [Python, Langchain, HuggingFace, ChromaDB]	Spring 2025
<ul style="list-style-type: none">Built a Retrieval-Augmented Generation (RAG) pipeline using Gemini 2.0 Flash and real semiconductor manufacturing (Surface Mount Technology, SMT) data to auto-generate Failure Mode and Effects Analysis (FMEA) tables, achieving 0.78–0.93 semantic similarity and 90%+ field coverage, exceeding GPT-4 academic benchmarks, and reducing manual effort by 80%+.Integrated dense retrieval (bge-small-en embeddings) with BM25 hybrid search to ground LLM outputs in IPC/JEDEC standards, boosting BLEU/ROUGE scores by 15–20% vs baseline LLMs and enabling production-ready FMEA generation with context attribution and minimal expert edits.	
RepoMatcher [Python, Google BigQuery]	Spring 2025
<ul style="list-style-type: none">Architected a knowledge graph-enhanced recommendation system for GitHub repositories, integrating TransE/RotatE embeddings with neural collaborative filtering to deliver explainable, diverse suggestions; achieved HR@10 of 34%, NDCG@10 of 21%, and MRR of 26%, on par with leading KG recommender benchmarks.Designed and implemented a scalable end-to-end pipeline in PyTorch and PyKEEN, processing 41+ GitHub metadata features (GHTorrent) into relational triples and training a KG-augmented model that outperformed traditional collaborative filtering baselines by over 20% in top-10 ranking accuracy.	

LEADERSHIP

IEEE Computer Society - VIT: Secretary	01/2023 - 12/2023
<ul style="list-style-type: none">Led a cross-functional team to launch Chota Dhobi, a laundry service tracking app that has 24000+ active users. Streamlined user onboarding and drove 15% month-over-month user growth through campaigns.Organized HackBattle, a 36-hour hackathon with 1,000+ participants, managing logistics, workshops, and sponsorships, resulting in a 30% increase in engagement and funding.	