Veer Mickey Shah

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Education

B.S. + M.S. in Computer Science | Minor in Finance — Aug 2023 – May 2027
University of Texas at Dallas — *GPA: 3.85*

- **Honors:** CS Honors, National Merit Finalist, Collegium V
- **Study Abroad:** Universidad Carlos III de Madrid
- **Relevant Coursework:** Data Structures and Algorithms, Operating Systems, Databases, Statistics/Probability, Systems Engineering, Java, Linear Algebra, Discrete Math, Computer Architecture, Digital Logic, Automata Theory, Software Engineering, Database Design, Machine Learning, Compilers, Artificial Intelligence, Blockchain

Experience

Full Stack Software Engineering Intern — June 2025 – Present
Fidelity Investments — *Westlake, TX*

- Created a **modern ReactJS frontend** hosted on **S3**, integrated with API Gateway, enabling 1000+ architects to test searches via an intuitive web interface, logging all responses and feedback.
- Built a **hybrid semantic-lexical search** engine using AWS OpenSearch Serverless, text-embedding-3, GPT-4o, FAISS, HNSW, and Hugging Face reranker, boosting solution designing speed for 500+ internal developers by $\tilde{6}0\%$
- Developed **3 AWS Lambda** functions in **Python**, automating data ETL (RDS→S3) with complex **PostgreSQL** queries, embeddings with OpenAI, and hybrid search scoring, reducing manual search time by 80%.
- **Automated AWS infrastructure** using **AWS CloudFormation** and **Jenkins**, cutting deployment time of AWS IAM roles, Lambda, S3, OpenSearch, EventBridge, from days to under 1 hour with a fully reproducible setup
- Used **Playwright** to grab cookies and **Beautiful Soup** to scrape 500+ architecture and documentation pages

Software Engineering Intern — Jun 2024 – Jul 2024
Investamark LLC — *Irving, TX*

- Implemented **secure, local AI** models by leveraging **Ollama** and **Docker** to run models like Phi3 and Mistral
- Customized OpenWebUI's **Svelte** frontend to align with client branding and improve **UX with tailored design**
- Created a synthetic dataset for fine-tuning a philosophical AI agent and implemented **RAG** with more than **10000 documents** using ChromaDB, OpenAIEmbeddings, and Langchain, preventing 90% of hallucinations

Undergraduate Research Intern — Jun 2023 – Jan 2024
University of Texas at Dallas — *Richardson, TX*

- Developed scripts to setup and run **ROS2** simulations for **anomaly detection in autonomous** vehicle systems
- Used **Linux-based systems** to conduct fuzzing attacks on autonomous drones using high-frequency noise

HackUTD Director — Dec 2025 – Present
Association for Computing Machinery — *Richardson, TX*

- Attended: 13, Organized: 2, Won: PennApps, TamuHacks, SMU HackTheChains, HackFin, HackUPC, HackSMU

Projects

Charity Clarity - SMU Hackathon | *Solana, Next, React, Node.js, Git* — Mar 2024

- **Won 1st prize** for developing a **React Web App** that leveraged the **Solana blockchain** to ensure charity donations were transparent and immutable, enhancing **accountability and trust** in charity fund expenditures
- Created a **RESTful API** using **Node.js** and **Web3.js** and utilized **Express.js** for cleaner routes and scalability
- Integrated crypto wallets and **zero trust login** to streamline the donation process for users unfamiliar with crypto
- Implemented **Chart.js** to create interactive and visually engaging charts for incoming donations and fund expenditures, allowing stakeholders/donors to easily monitor financial flows for embezzlement and misuse of funds

Technical Skills

Languages: Typescript, Javascript, Python, SQL, Go, C++, Java, Solidity, Dart
Skills: Project Management, Agile Methodologies, Scrum, Negotiation, Communication
Tools/Technologies: React, Express, MongoDB, MySQL, PostgreSQL, Node.js, Next.js, Flutter, Firebase, Expo React Native, Git, Docker, Postman, AWS, GCP, Firebase, Android Studio, Jupyter Notebook, Jira, Linux/Unix, Excel
Libraries: Pandas, NumPy, Matplotlib, Langchain, TensorFlow, Spacey, OpenCV, Flask,, Scikit-Learn, Beautiful Soup
Certifications: AWS Certified Cloud Practitioner, Stanford Advanced Learning Algorithms and Unsupervised Learning