VIHAAN SHAH

Evanston, Illinois • (708) 971-6452 • vihaanshah2026@u.northwestern.edu
linkedin.com/in/shah-vihaan/ • github.com/VihaanShah26 • vihaanshah.co.in

EDUCATION

Northwestern University, Evanston*, IL*   **June 2026**
B.S. and *M.S.* in Computer Science | *Certificate* in Financial Economics (Kellogg School of Management)   **Major GPA 3.95/4.0**
Coursework: Cloud Development, Data Structures and Algorithms, Parallel Computing (CUDA, OpenMP), NLP, Deep Learning, Computer Networking, Operating Systems, Distributed Systems, Microcontroller Programming, Kernel Development, Object-Oriented Programming
Awards: Dean's List Award | High Honors | Distinction in Communication Skills (Trinity College London) | ACT: 36/36

WORK EXPERIENCE

Oracle   June 2025 – September 2025
Software Engineering Intern – Oracle Cloud Infrastructure   Santa Clara, CA
- Developed a RAG-based Slackbot using OCI Generative AI to assist **8000+** engineers with fixing security vulnerabilities. Optimized model training by using T-few fine tuning on dedicated AI clusters which increased training efficiency and minimized resources used.
- Increased response efficiency by providing immediate solutions to security threats as opposed to an average resolution time of **1 week**.

Atomera   June 2024 – August 2024
Software Engineering and Data Management Intern   Los Gatos, CA
- Designed a web tool used by **30 physicists** to visualize Raman Spectroscopy data for silicon and deconvolve the peak into the combination of a shoulder peak and primary peak enabling analysis of the amorphous state of the semiconductor material.
- Built an interactive app for **3 microscopes** to process images using Python's OpenCV and automate silicon defect detection workflows.
- Devised analytical algorithms to generate real-time reports with **15 key statistics**, enhancing efficiency in semiconductor wafer analysis.

Billed LLC.   January 2024 – December 2024
Backend Developer   Evanston, IL
- Engineered a lightweight **Swift iOS app** allowing diners (**20 beta users**) to take a picture of a bill, automatically calculate local taxes and tips, easily integrate with Venmo and offer versatile bill splitting options without requiring other diners to download the app.
- Established Lambda functions that utilized AWS Textract for Optical Character Recognition and achieved **93% test accuracy**.
- Automated testing and deployment with **CI/CD pipelines** using AWS Amplify, ensuring efficient updates and seamless app delivery.

Accenture   June 2023 – August 2023
Software Engineering Intern   Mumbai, MH
- Leveraged Python's **Langchain** library and OpenAI's API to build a chatbot allowing users to provide and interact with big data through **natural language** to easily access information, generate analysis reports and obtain predictive maintenance schedules.
- Implemented the resulting AI chatbot in factories for a large Consumer Goods Company, resulting in an **8% revenue growth**.

PERSONAL PROJECTS

Lines N' Lyrix (Freelance Web App)
- Awarded a **$750** contract to develop a web app allowing users to create and play personalized engaging song guessing games.
- Designed UI/UX with **Node.js**, **Express.js**, and **React.js** and utilized AWS (RDS, S3, EC2) for RDBMS, storage, and hosting.
- Built a RESTful API gateway for seamless backend resource access, improving scalability and user experience.

Sports Analysis Software
- Developed software using **decision trees** and **sentiment analysis** to predict outcomes between sports teams based on historical data.
- Increased accessibility to visually impaired people by enabling user interaction with the interface through voice commands.
- Strengthened expertise in AI/ML, NLP, audio processing, and LLM-based model development. Achieved **85% test accuracy**.

Northwestern University Campus Navigation
- Processed an Open Street Map of the campus and converted data into graph structures for optimized time and space complexity.
- Applied Dijkstra's algorithm to compute the shortest route between any two points, ensuring efficient navigation.
- Gained experience in refactoring code, implementing **OOP** principles, unit testing and large-scale programming in **C/C++**.

LEADERSHIP EXPERIENCE

Teaching Assistant (Scalable Software Architecture, Parallel Computing)   March 2023 – Present
- Guided **600+** students in the fundamentals of cloud development and aided in creating and deploying **30+** scalable applications.
- Assisted **200+** students with analyzing serial code, finding scope to parallelize it using OpenMP and discussing performance differences.

Technical Lead (Develop + Innovate for Social Change)   January 2024 – Present
- Responsible for ensuring **3 teams** of **6 Software Engineers** each delivered full-stack projects on time based on their client's requirements
- Enhanced skills in team management, conflict resolution, project design, effective client communication and project documentation.

SKILLS & INTERESTS

Computer Languages: Python, JavaScript, C, C++, C#, Java, Assembly, SQL, MATLAB, HTML, CSS, Racket, Arduino
Technical Skills: Git, Agile Scrum, Jira, Docker, Neural Networks, PyTorch, Webservices, Linux, UI/UX, Full-Stack Development, TCP/IP
Memberships: IEEE, Responsible AI Student Organization, KTP Pre-Professional Technological Fraternity, EPIC (Committee Head)