

Thu Nguyen

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EDUCATION

Stony Brook University

May 2028

Bachelor of Engineering in Computer Engineering

Stony Brook, NY

- **Awards:** You Are Welcome Here Scholar (50% Tuition), Global Excellence Scholarship (24,000\$ over 4 years)

EXPERIENCE

Stony Brook World Trade Center Health Program

Stony Brook, NY

Lead Student Developer

April 2025 – Present

- Led a **6-person team** to ship a searchable interview archive for the 9/11 Memorial & Museum; delivered demos on time and aligned releases via Jira milestones.
- Designed & containerized the backend (Docker) with **FastAPI + PostgreSQL**; built keyword & semantic transcript search with **sub-300 ms** query latency across **800+** hours of audio/video.
- Built the **ETL/data pipeline** end-to-end: **AWS S3** storage, metadata/transcript ingestion, and **EC2** compression workflows that reduced file size **90%** while preserving playback quality.
- Authored runbooks + contributor docs (setup, deploy, troubleshooting) that cut onboarding from 2 days to 2 hours for new contributors.
- Set up **CI/CD** (build/test/deploy) to automate releases and improve reliability across environments.

FPT Software

Ho Chi Minh City, Vietnam

Software Engineer Intern

June 2025 – August 2025

- Led a team of **5 interns** through Jira sprint planning and code reviews, delivering 100% of sprint commitments and improving throughput by **20%**.
- Built production REST APIs using **Spring Boot** with **JPA/Hibernate** and **PostgreSQL**, applying layered architecture and validation for reliability.
- Integrated **Kafka** for asynchronous messaging, boosting scalability and reducing system bottlenecks.
- Implemented Keycloak-based role access control to standardize authentication across services.
- Established **JUnit5/Mockito** test suite with **90%+** coverage, cutting pre-merge defects.

PROJECTS

Percepta - HackPrinceton'25

Princeton, NJ

Swift, YOLO, ARKit

November 2025

- Shipped a iOS app that lets users pick a subject “lens” (math, physics, biology, etc.) and see real-time, subject-specific overlays on recognized objects.
- Integrated on-device YOLOv8 segmentation that hit **30 +FPS** with lightweight tracking to keep labels anchored and responsive.
- Connected detections to a local LLM and iOS ARKit renderer through a clean JSON schema with caching/debouncing, enabling low-latency annotations and smoother UX.

SkinGuard - HackNYU'25 Winner

New York City, NY

MERN Stack, OpenAI API, JWT, Flask, Github

February 2025

- Developed a skin disease diagnostic platform that processed **1k+ test images** and delivered real-time results, winning **Best First Hack among 640+ participants**.
- Implemented JWT authentication and integrated an OpenAI-powered chatbot to improve user interaction.
- Built 10+ React pages from high-fidelity Figma prototypes, ensuring smooth and consistent user experience.

SeeSay - HopperHack'25 AI/ML Winner

Stony Brook, NY

Web Speech API, WebGazer, React, Js

February 2025

- Created an accessibility browser enabling hands-free navigation via eye-tracking and voice commands, winning **Best AI/ML Immersion among 230+ participants**.
- Implemented and fine-tuned WebGazer.js models to improve gaze accuracy by 30% and reduce false activations by 25%, validated through usability testing.

TECHNICAL SKILLS

Programming: Python, Java, JavaScript/TypeScript, Swift, SQL, C, C++

Backend/Cloud: Spring Boot, FastAPI, Node/Express, PostgreSQL, MongoDB, AWS, Docker, Kafka, Keycloak

Frontend: React, Next.js, HTML/CSS, TailwindCSS

ML: PyTorch, scikit-learn, Hugging Face, NumPy/pandas, OpenCV