

Brayden Nguyen

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Education

University of Pittsburgh

BS in Computer Science with Honors

Pittsburgh, PA

Spring 2026

- **GPA:** 3.93/4.00
- **Courses:** Web Development, Software Quality Assurance, Operating Systems, Systems Software, Computer Organization
- **Leadership:** Computer Science Club (Special Events Coordinator), Smash Bros Club (Tournament Organizer)

Skills

Languages: Python, Java, JavaScript, Rust, C, C++, TypeScript, HTML/CSS, x86

Frameworks: Flask, Express.js, React, Node.js, OpenCV, Pandas, NumPy, JUnit

Tools: Git, Unix, Docker, Amazon Web Services, MongoDB, Selenium, TensorFlow, Google Cloud, CI/CD, MySQL, PostgreSQL)

Experience

PNC Financial Services

Incoming AI Software Engineer Intern

Pittsburgh, PA

April 2024 - August-2024

IBM

Incoming IBM Accelerate Fellow

Remote

June 2024 - August-2024

Surreality Lab – UPMC & Pitt

Full Stack Software Developer Intern

Pittsburgh, PA

January 2024 - Present

- Developed a WebSocket API for connecting electric scalpels to an AR dashboard, enhancing surgical precision & reducing contamination risk, leading to faster surgeries & improved communication in the operating room.
- Spearheaded IoT project in OR, leveraging AR dashboards for display & button control, employing computer vision & machine learning for segmentation, optimizing operational efficiency.

Stanford University

Student Instructor

Remote

April 2024 - Present

- Taught Stanford's CS 106A course to students globally, taken by 1,600+ students.
- Educated students in Python leveraging beginner-friendly libraries such as Stanford's Karel

UC Santa Barbara Human-AI Integration Lab

Research Programmer

Remote

September 2023 - December 2023

- Simulated Hobbesian Social Contract Theory using generative agents created with OpenAI to verify and build open his findings.
- Architected an algorithm for generative agents to propose and discuss policies, taking the simulation from numbers to full on conversations.

Local Company

Full Stack Software Developer Intern

Camden, DE

June 2023 - August 2023

- Migrated company website from Wix to self-hosted React and Node web-app, projecting \$20,000 savings year after year and increasing productivity of front-desk scheduling team by 60%.
- Added an on-website scheduler for appointments using Google Calendar API to reduce the friction of scheduling for patients and stored the appointments in a MySQL database.

Projects

The-Social-Space.com

February 2024 - Present

- Graphically represented TikTok's social media algorithm through 300,000+ video data with an interactive and intuitive Three.js and WebGL 3d graph to use for sociological and marketing analysis.
- Created a custom weighted graph data structure and a Flask API to easily connect to a React Force Graph.
- Hosted on an AWS EC2 instance with containerized backend and frontend using Docker.

MediLingual: 1st Place Healthcare Hack @ YHack 2024

March 2024

- Universal assistant which provides medical domain-specific multilingual translation services in 99 languages.
- Developed a Flask REST API that handles any combination of 4581 to ease translation between patient and doctor in real time.
- Utilized Whisper and OpenAI API with few-shot and chain-of-thought prompting to remove any untranslatable/confusing medical jargon.

AeroVision: Best Software in Robotics Winner @ PennApps XXIV

September 2023

- Fine-tuned image segmentation OpenCV model to recognize aircraft marshal signals to allow for robotic process automation with Viam robot.

ASLModel: 1st Place Overall @ SteelHacks

March 2023

- Trained a custom CV model from 25,000 hand images displaying ASL signs, allowing for automatic ASL to English translation.
- Created web-app with React to interface with webcam and create an accessible interface which allows for continuous integration of user training data for model improvement.