Brayden Nguyen

443-350-7090 | braydennguyen8@gmail.com | LinkedIn | GitHub | Website

Education

University of Pittsburgh Aug. 2022 – Dec. 2025
Bachelor of Science in Computer Science (GPA: 3.9/4.0) *Pittsburgh, PA*
- **Extracurriculars**: PittCSC (VP), SteelHacks (Executive Director), Data Structures & Algorithms TA, Ski Club

Experience

Microsoft May 2025 – Aug. 2025
Full Stack Software Engineer Intern *Redmond, WA*
- Built an AI agent in Python that monitors health of 2M+ Azure tenants and triages on log data in real time
- Managed 100k+ logs through Azure Data Explorer and Pandas in a multi-threaded environment for fast processing
- Developed an algorithm to classify cluster and tenant health to identify issues linked to Windows update rollouts
- Automated update management through an AI pipeline to decide when to pause broken Windows updates

Surreality Lab @ UPMC Jan. 2024 – Apr. 2025
Augmented Reality Research Lead *Pittsburgh, PA*
- Implemented a transformer to detect seizure activity from live EEG and ECoG readings during neurosurgery
- Developed a WebSocket API connecting electric scalpels to AR, enhancing precision and reducing contamination
- Leveraged a machine learning model to create auto-segmented interfaces in Unity for augmented reality

PNC Bank May 2024 – Aug. 2024
NLP Software Engineer Intern *Pittsburgh, PA*
- Engineered PNC's first customer-facing AI assistant with JavaScript and Kore.ai to increase car loan turnover rate
- Built a keyword generator using n-gram cosine similarity with spaCy to fine-tune an LLM on 250+ FAQs
- Architected a proof of concept RAG pipeline using Azure OpenAI for a content secure search assist
- Automated page printing to PDF for 300+ urls through Selenium to efficiently gather AI training data

Human-AI Integration Lab @ UC Santa Barbara Sep. 2023 – Dec. 2023
Large Language Model Research Assistant *Santa Barbara, CA*
- Simulated Hobbesian Social Contract Theory using ChatGPT backed generative agents for sociology research
- Constructed a conversation algorithm for generative agents to propose and discuss policies autonomously

Responsive Health June 2023 – Aug. 2023
Full Stack Software Developer Intern *Camden, DE*
- Migrated company website to React and Node increasing scheduling rate by 30% generating additional $20,000
- Added a scheduler using Google Calendar API and PostgreSQL to reduce the friction of scheduling for patients
- Wrote a script using OpenCV to process handwritten forms onto an excel sheet for better tracking and processing

Projects

SimplyFy | *FastAPI, Firebase, LLMs, Fairseq* 1st Place Productivity @ UDel Hackathon
- Built a Chrome extension that simplifies text through LLMs and preserves formatting to improve web readability
- Trained a custom encoder-decoder simplification model using Meta's Fairseq to enhance data security
- Enabled real-time text processing by deploying a FastAPI backend integrated with Firebase logging

The Social Space | *Python, Flask, React, AWS, Docker*
- Graphically represented TikTok's social media algorithm using 300K+ video's hashtag data for marketing analysis
- Hosted to over 10,000 users on an AWS EC2 instance with Dockerized backend and frontend for easy deployment
- Created a custom weighted graph data structure and a Flask API to connect to a React Force Graph frontend

Custom Database Cache | *C++*
- Developed a Redis-like in-memory key-value store with custom TCP protocol for client-server communication
- Implemented a dynamically resizable hashmap with consistent-time operations and custom memory management

Technical Skills

Languages: Python, JavaScript, Java, TypeScript, C, C++, Rust, Haskell, C#, SQL, HTML/CSS
Frameworks/Libaries: React, FastAPI, pandas, Node.js, FastAPI, JUnit, Next.js, Express, spaCy, OpenCV, PyTorch
Developer Tools: Git, Docker, AWS, Azure, Postgres, Firebase, Linux, MongoDB