

Elijah Farrell

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EDUCATION

Stony Brook University, Stony Brook, NY

Graduated: May 2024

Bachelor of Engineering in Computer Engineering

Relevant Courses: Computer Vision, Operating Systems, Machine Learning Systems, Mobile Cloud Computing

SKILLS/CERTIFICATIONS

- **Programming Languages:** Python, C/C++, Javascript, Java, HTML, CSS, Typescript
- **Databases/Cloud:** Azure, AWS, Google Cloud, Firebase, MongoDB, Jira, Github
- **Frameworks:** Pandas, HuggingFace, Langchain, PyTorch, ONNX, React, Vue, Node
- **Certifications:** Enhance Text Generation with RAG, LangChain, and Vertex AI; Generative AI with Large Language Models

PROFESSIONAL EXPERIENCES

Cyborg Mobile

Remote

Software Engineer Intern

April 2024 – Present

- Enhanced application and user engagement by developing a Chatbot LLM with React, TypeScript, and Node.js, utilizing the OpenAI Assistants API.
- Scaled backend capabilities by designing RESTful APIs and integrating Firebase, facilitating data storage and retrieval for over 80 students.
- Collaborated closely with the head of engineering to follow best practices in software development, resulting in a high-quality a
- Fine-tuned OpenAI's gpt-4o combined with RAG for improved results on a grant-writing assistant

Microsoft

Redmond, WA

Software Engineer Intern, IC3-AI

May 2023 – August 2023

- Improved bandwidth estimation model's real-time detection accuracy by 100%, optimizing diagnostics using C++.
- Reduced audio score estimation time by 68% in Microsoft Teams, impacting 1M+ calls, through the integration of a real-time audio MOS machine learning model with C++, Python.
- Collaborated with 5+ engineers from different teams to complete tasks in an effective manner.

Soca Islands

Remote

Software Engineer (Freelance)

March 2023 – April 2023

- Streamlined checkout process on a client website, reducing checkout time by 33% through the implementation of filtering and recently viewed features using VueJS, Typescript, HTML, and CSS.
- Enhanced product inventory management by developing a CRUD API for Firebase Firestore integration.

Microsoft (Cyborg Mobile)

Remote

New Technologist Intern

June 2022 – August 2022

- Developed an MVP for a web app providing relatable on-line learning for underprivileged adults with a team of 4 other interns.
- Utilized React, Git, Javascript, HTML, CSS to add and improve 3 frontend features.
- Integrated secure user authentication with Firebase Cloud.

PROJECTS

Computer Vision for Visual Impairment | C++, Python, Yolo-V5

Aug 2023 – May 2024

- Developed an assistive system for the visually impaired by integrating an Intel LiDAR camera with a custom object-detection model modified to utilize real-time depth data, enabling real-time object-detection
- Implemented text-to-speech functionality to audibly convey detected objects and distances.

AI Chatbot | Python, Flask, OpenAI API, Airtable

Feb 2024 – March 2024

- Implemented and deployed a GPT-4 Turbo based chatbot using RAG to help facilitate student learning and teacher insights
- Helped a class of 115+ students understand classwork and lecture material.

- Used Llama 3.1 and Nvidia NIM with 3+ LLM transformation features to have short-term memory of 20K context
- Built full agent workflow - planner, executor, evaluator - mocking the reasoning of OpenAI's new o1 model

COMMUNITY ENGAGEMENT

- Chi Alpha Christian Fellowship, **President** *June 2022-May 2024*
 - Led weekly student GBM's of 15+ students
 - Led a team of 3 and a team of 5 executive club board members
 - Organized and Collaborated with 4+ on campus clubs to create multiple events with 100+ attendees
- SBU Undergraduate College, **Resident Assistant & Teaching Assistant** *August 2023- May 2024*
 - Oversaw 45 residents – responsible for student wellness and interaction.
 - Mediated 2+ roommate conflicts and issues.
 - Assisted with lab activities for Data Structures and Algorithms in C++ with 20 students