

EDUCATION

University of Maryland

B.S. in Computer Science, ML concentration

College Park, Maryland

Expected Graduation, May 2027

- o **Related Coursework:** Object-Oriented Programming, Object-Oriented Programming II (Data Structures and Algorithms), Intro to Computer Systems, Linear Algebra, Calculus I & II, Probability & Statistics, Discrete Math

EXPERIENCE

GBCS Group

Backend Intern

Remote

April 2025– Aug 2025

- **Optimized backend APIs in Node.js/Express with Prisma and Postgres**, improving proposal-loading times by **4x (1300ms to 300ms)** and accelerating authentication workflows by **5x** through LRU caching, query optimization, and parallelized API calls across frontend integrations.
- **Served as backend lead** for two internal platforms (*GBCS University* and *Voop*), leading check-ins and troubleshooting sessions, guiding teams to resolve critical production issues in half the allotted time, and maintaining the production **Azure database and infrastructure**.

DocuGuardian

Development Intern (Full-Stack Development Intern)

Remote

Dec 2024– July 2025

- **Contributed to the secure file uploading feature**, building the form and encrypted file handling workflows to protect sensitive documents.
- **Built and enhanced 25+ core features** across sign-in workflows, landing pages, and dashboard using **Java, Spring Boot, React, TypeScript, and MySQL**.
- **Developed backend integrations** to ensure seamless communication with frontend features and performed **end-to-end testing** to deliver a stable, production-ready MVP.

Garden For Wildlife

ML Intern

Remote

Aug 2024-current

- **Designed and implemented an AI-powered chatbot** using **GPT-4o, FAISS, and a Retrieval-Augmented Generation (RAG) pipeline**, delivering personalized, location-based native plant recommendations across the U.S
- **Integrated and processed a structured dataset of 110+ native plant species (CSV)** while documenting system architecture, API integrations, and user flows to ensure accurate insights, scalability, and maintainability.

PROJECTS

AI Native Plant Chatbot

March 2025 – Present

- Developed a production-ready chatbot using **FastAPI, React, GPT-4** with a **Retrieval-Augmented Generation (RAG) pipeline**, and **FAISS** to deliver personalized, **location-based native plant recommendations across the U.S**.
- Planned and documented the end-to-end system architecture—including API integrations, conversation memory, and prompt engineering—while processing a CSV of **110+ unique plant species** for accurate gardening insights.

Tetherboard

April 2025 – April 2025

- **Built a real-time collaborative knowledge platform in 36 hours**, supporting live, simultaneous editing by multiple users with markdown, syntax highlighting, LaTeX, image embedding, and interactive "Tethermap" visual graphs.
- **Integrated an AI chatbot using Google's Gemini API** for contextual Q&A across shared workspaces, while developing the platform with **React, TypeScript, Firebase, Tailwind CSS, and shadcn** to ensure a responsive and scalable user experience.

AI Youtube Summarizer

July 2024 - August 2024

- **Built a full-stack YouTube summarizer using React, Node.js, MongoDB, and Gemini 1.5**, featuring structured summary generation, history tracking, dynamic sidebar navigation, and seamless copy-to-clipboard functionality for a polished user experience.

ACTIVITIES AND LEADERSHIP

Do Quantum

Quantum Researcher

College Park, Maryland

February 2025-current

- **Participating in a three-semester research program with Do Quantum**, focusing on **post-quantum cryptography (Kyber, Dilithium, McEliece)** using **Qiskit, PQClean, and SageMath**, with a goal of publishing findings.

SKILLS

Programming: Java, Python, C, HTML/CSS, React.js, Node.js, Express.js, TypeScript.js, SpringBoot, JPA, Maven, MongoDB, Agile Methodologies, Shell Scripting, LangChain, FastAPI

Tools: Eclipse, Pycharm, IntelliJ, VSCode, Git, Jupyter Notebooks, NumPy, Pandas, Scikit-learn, MongoDB Compass, MYSQL Workbench, JIRA, Confluence, Postman, Docker, Azure