

Software Engineer | AI/ML & Full-Stack Development

## EDUCATION

**University of Maryland, College Park — B.S. Computer Science & Engineering** | Aug 2021 – May 2025

Relevant Coursework: Artificial Intelligence, Machine Learning, Data Structures, Algorithms, OOP, Signals & Systems

## SKILLS

**Languages:** Python, Java, JavaScript, TypeScript, SQL, C, OCaml, Assembly, HTML, CSS

**Frameworks & Libraries:** Flask, React.js, Node.js, Docker, TensorFlow, PyTorch, Scikit-learn, OpenCV, Hugging Face

**Tools & Platforms:** AWS, Terraform, GitLab, CI/CD, Linux, FastAPI, REST APIs, API Gateway, Cloud Computing, Software Development Lifecycle, Full Stack, Promises, JWT, AI/ML, Convolutional Neural Networks, UI/UX, ResNet, Vector Search

**Databases:** MySQL, MongoDB(NoSQL)

**Hardware:** STM32, UART, Arduino, FPGAs, Oscilloscopes, CAD, Embedded Systems, Circuit Design, Unix

**Soft Skills:** Leadership, Communication, Adaptability, Collaboration, Problem-solving, Innovation, Team Work, Self-driven

## EXPERIENCE

**Zillion Technologies Inc, VA — Software Developer** | Jun 2024 – Aug 2024; Jun 2025-Aug2025

- Reduced **file lookup** times by **80%** by delivering a production-ready **semantic search system**, through client collaboration
- Increased processing by **30%** by designing a **file traversal** algorithm to create a **ChromaDB** across **1000s** of documents.
- Implemented a **SharePoint API** with **file categorization** and **delta** updating, **OCR** for pdfs.
- Integrated **Retrieval Augmented Generation**, using **FastAPI**, **OpenAI** & **Hugging face** embeddings, for context-aware answers.
- Managed full delivery **lifecycle** using **Agile/ JIRA**, resolving **100%** of assigned tickets ahead of schedule.

**Engineering IT, University of Maryland** | Aug 2022 – May 2025

**Lead Software Developer** — May 2024 – May2025

- Managed a **10-person** team; improved productivity **40%** via hiring, onboarding, & structured training modules using **scrum**.
- Delivered **200%** more features, breaking complex features, driving **systems-level** architecture, into developer-friendly tasks.

**Software Development Engineer** — Aug 2022 – May 2024

- Built and maintained **full-stack** features with ReactJS, Flask, GitLab, **CI/CD**, Docker.
- Cut user **navigation time** by **50%** by redesigning **frontend** UI, dividing tool buttons by category via **backend** API call.
- Reduced delays by **30%** by developing **IAM** and order management platforms for **100+** lab staff.

## LEADERSHIP

**President** — Cloud Computing Club (Apr 2023 – Present): Lead 12 VPs, manage **300+** members in **AWS**-focused learning.

**President** — Resident Housing Association (Aug 2022 – May 2023): Planned events for **2,000+** residents.

## PROJECTS

- **NaviGatr: Computer vision** assistant for visually impaired; YOLOv5/ NanoDet object detection, Apple depth estimation API, EfficientNet emotion, trained on **FER**, recognition on Raspberry Pi + Coral TPU in custom CAD designed 3D-printed headgear.
- **Self-Balancing Robot:** STM32, 2 motored, **PID**-controlled robot with gyroscopic sensors; ROS-based real-time stabilization.
- **Quintacle AI: LLM + RAG** personal assistant for schedules, fitness, journaling, diet; voice control and computer vision.
- **Automated Blinds:** ESP32-based smart blinds with **Alexa API**, Smart home synchronization, and alarm-based motor control.

## VOLUNTEERING & ACTIVITIES

Clark Ambassador — James Clark School of Engineering (tours, mentorship) | Database Coordinator — Rejoice Health Foundation| Whiffleball 2024 — Fundraiser participant | UMD Club Sailing, Runway Modelling, Choir