

# HASHEM ALOMAR

667-300-9904 [halomar@umd.edu](mailto:halomar@umd.edu) [linkedin.com/in/hashem-alomar/](https://linkedin.com/in/hashem-alomar/) [hashemalo.vercel.app](https://hashemalo.vercel.app)

## Education

### University of Maryland, College Park

Bachelor of Science in Computer Science and Mathematics

May 2027

GPA: 3.8

## Experience

### Undergraduate Research Assistant - Quantum Machine Learning

University of Maryland

January 2025 – Present

- Increased daily back-test throughput by 40% by engineering a multi-asset QLSTM pipeline in PyTorch + PennyLane, scaling a 2024 single-stock model to predict 10+ equities concurrently, saving ~\$100 per iteration.
- Achieved 7% higher model accuracy by testing QLSTM models on IonQ hardware across 3–8 qubits, benchmarking real-hardware performance vs. noisy simulators to validate quantum advantage under practical constraints.
- Reduced RMSE (error) by 12% on 4-qubit configurations by optimizing QLSTM circuit depth and topology, leveraging IonQ API, demonstrating superior performance to classical LSTM across 4–12 qubits.

### Software Engineering Intern

May 2025 – August 2025

4A Consulting, LLC

- Developed a recruiter dashboard using React, Next.js, & AWS RDS, automating applicant tracking and interview scheduling for 1,000+ applications, reducing administrative overhead by 20% and improving hiring efficiency.
- Implemented an AI interview platform with an admin dashboard powered by Node.js to manage questions in real time, using Amazon SES for online assessment automatic email generation, accelerating hiring process by ~6 days.
- Created an AI-powered company-wide chatbot using Cloudflare(4o-mini) & Pinecone integrated with LlamaIndex to automate employee & customer support, saving 100+ hours of manual work monthly.

### Software Engineering Intern

May 2024 – August 2024

Mildenberg Boender & Assoc.

- Designed a project management intranet platform with React/Next.js, cutting project timelines by 5%.
- Reduced document retrieval time by 25% by integrating a search engine into intranet platform using Fuse.js fuzzy search library that enables quick access to 5,000+ crucial civil engineering documents.
- Increased average session duration by 10% by redesigning the company site with Next.js (SSR), React, and Tailwind, boosting interactivity with modern UI components and responsive media handling.

## Projects

### Crossie — TypeScript, SQL, React, Supabase

- Engineered an interactive annotation Chrome Extension with 500+ installs and 5,000+ annotations, enabling real-time text highlighting and collaborative commenting across any website.
- Engineered full-stack authentication system using OAuth2, Supabase, and Next.js companion site, implementing DOM text selection with W3C-style selectors and cross-tab state synchronization for 1,000+ monthly visits.

### Dr. Terp — React, Typescript, Python, BeautifulSoup

- Built a full-stack web app with 2,000+ visits to help UMD students make data-driven professor selection.
- Implemented a Python web scraper using BeautifulSoup to parse 24,000+ UMD course records bimonthly.

### Craving Hour Halal Foodtruck Website — React(Native), TypeScript, AWS(CF, RDS, Lambda)

- Developed a scalable full-stack website using React, Typescript and Tailwind, deployed via Docker on AWS Cloudfront, serving 200+ customers daily.
- Architected admin portal for employees using React Native, AWS Lambda + S3, PostgreSQL, enabling employees to make live changes to client-facing website, reducing manual workload by 10+ hours monthly.

## Leadership

### ProjectLIFT — Founder

April 2025 – Present

- Founded ProjectLIFT, a student-run club delivering technological solutions to 5+ local small businesses.

### B!g Think AI — Vice President

August 2024 – Present

- Lead AI/ML workshops with 30+ students on concepts such as Linear Optimization, Gradient Descent, Random Forest.

## Technical Skills

Languages: Python, Java, C, JavaScript/TypeScript, SQL(PostgreSQL)

Frameworks & Dev Tools: Next.js, Git, Express/Node.js, React/React-Native, Firebase, AWS(CloudFront, RDS, Lambda), Tailwind, SQLite, Unix, Supabase

Libraries: PyTorch, NumPy, Pandas, TensorFlow, Scikit Learn, PennyLane