

Mohammed Y. Zaid

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EDUCATION

University of California, San Diego

La Jolla, California

B.S. in Mathematics & Computer Science - GPA: 3.50, Dean's Honors

Expected Graduation, June 2026

Relevant Coursework: Algorithmic Design and Analysis, Computer Systems Organization, Operating Systems, Software Engineering, Networks and Communications, Digital Architecture, Computation and Hardware Acceleration

EXPERIENCE

Muslim Tech Collaborative

La Jolla, CA

Vice President

April 2024 - Present

- Constructed **10+** full-stack apps using **React/Node.js**, applying agile sprints to boost member skills.
- Developed **ML pipelines** with TensorFlow, streamlining preprocessing and training to reach **99%** accuracy.
- Facilitated **10+** resume workshops, creating ATS-ready templates that improved internship callbacks by **30%**.
- Led more than **30** collaborative projects, enforcing **Git/Agile practices** to cut delivery time by **35%**.

VEX Robotics

Lake Elsinore, CA

Founder & President

June 2021 - July 2022

- Formed an organization of **150+** members and served as a mentor, motivator, and team-builder.
- Programmed **1,200+** lines of C for autonomous object manipulation, integrating precise motor control.
- Applied **data-driven** tuning to boost robotic precision by 50% and cut operational errors by 30%.
- **Troubleshoot embedded** control systems and optimized performance for high-speed robot operation.

PROJECTS

To-Do Management System

August 2025 - Present

- Achieved **100%** Railway deploys via a 2-stage Dockerfile, Prisma migrations, **Next.js 14** with **Node 18**.
- Ensured **100%** TLS-encrypted CRUD operations with Postgres, `sslmode=require` to maintain functionality.
- Delivered **6+** UX boosts with loaders, progress bar, Ctrl+K, sorting, and chips to streamline the experience.
- Enabled **1-cmd**, type-safe builds using **TS 5.5**, ESLint, Prisma generate, **Git/GitHub workflow**.

IoT Botnet Detection System

August 2025 - September 2025

- Refined scalable ML pipeline via UCI N-BaIoT preprocessing, enabling analysis of **7M+** records.
- Improved dataset solidity by removing **157k+** duplicates and fixing imbalance, boosting fairness by **92%**.
- Reached **99.96%** accuracy through Decision Tree training with tuned depth, reducing errors to only **86**.
- Validated intrusion detection via correlation heatmaps on **205k** test samples, ensuring scalable deployment.

FIFA Rankings & Political Corruption Analysis

March 2025 - June 2025

- Engineered a Python pipeline across **106** countries and **400k+** data points, modeling FIFA trends.
- Automated more than **1M** CPI, press freedom, and GDP transformations, uncovering corruption ranking links.
- Built **25+** dynamic visualizations and **3 K-Means** clusters, exposing state-sponsored sportswashing.
- Executed large-scale regression analysis on **100+** models, confirming governance's impact on football.

Live Google Document Workspace

September 2024 - December 2025

- Enabled real-time collaboration for **100+** users using React, TipTap, Node.js, and Yjs (**10 ms** latency).
- Deployed Redis-backed presence tracking to maintain multi-user synchronization and state consistency.
- Enhanced usability with dark-mode UI, automated **CI/CD principles**, and cloud-native containerization.
- Experimented with GenAI-powered editing tools to improve productivity and reduce manual review time.

SKILLS

Programming Languages: Python, Java, TypeScript, C++, C, JavaScript, Go, MATLAB

Frameworks/Technologies: React.js, Next.js 14, Node.js, Tailwind CSS, Redis, Prisma, TensorFlow, Scikit-learn, Pandas, NumPy, Matplotlib

Cloud & DevOps: AWS (EC2, S3, Lambda), Docker, CI/CD Pipelines, Linux, Microservices, Railway

Databases: PostgreSQL, SQL, NoSQL

Development Practices: Agile, SDLC, Debugging & Troubleshooting, Distributed Systems, Operational Excellence

Certifications: HackerRank - Advanced Python developer, Advanced SQL, Advanced Go, Advanced JavaScript