# Mohammed Yasin 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, March 2027

**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

September 2022 - Present

- Taught **150**+ students C++ and software development tools, including Git, Valgrind, gdb, JUnit, and Unix architecture for data structure courses.
- Constructed 10+ full-stack apps using **React/Node.js**, applying agile sprints to boost member skills.
- Developed **Machine Learning pipelines** with TensorFlow, streamlining preprocessing and training to reach **99%** accuracy.

VEX Robotics Lake Elsinore, CA

Founder & President

August 2021 - June 2022

- Formed an organization of 100+ members and served as a mentor, motivator, and team-builder.
- Applied data-driven tuning to boost robotic precision by 50% and cut operational errors by 30% using C.
- Troubleshot embedded control systems and optimized performance for high-speed robot operation.

## **PROJECTS**

Task Manager

August 2025 - Present

- Developed a web application with a team of 3 for students to keep track of homework assignments via a to-do list and calendar.
- Emphasized **full-stack development** using **HTML/CSS** for front-end design and **JavaScript** for dynamic user interaction.
- Worked in an **Agile** environment with weekly sprint-planning meetings and helped decompose features into **sprint backlogs** for iterative delivery.

## **IoT Botnet Detection System**

August 2025 - September 2025

- Refined scalable **ML pipeline** via UCI N-BaIoT dataset, enabling analysis of **7 Million** + records to detect device-specific cyberattacks.
- Improved data cleaning and rebalancing by removing 157K+ duplicates and correcting class imbalance, improving dataset fairness by 92%.
- Trained and tuned a **Decision Tree Classifier**, achieving **99.96** % **accuracy** with only **86** misclassifications on **205K** test samples.

## FIFA Rankings & Political Corruption Analysis

March 2025 - June 2025

- Developed a **data analysis pipeline** in **Python** to study how governance impacts FIFA rankings across **106** countries.
- Automated more than **1M** CPI, press freedom, and GDP transformations, uncovering corruption ranking links.
- Built **25**+ visualizations and 3 K-Means clusters to identify statistical links between governance indices and FIFA rankings.

Programming Languages: Python, Java, JavaScript, TypeScript, C++, C, 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 & Development Practices:** PostgreSQL, SQL, NoSQL, Agile, SDLC, Debugging, Distributed Systems, Operational Excellence

Certifications: HackerRank – Advanced Python, Advanced JavaScript, Basic SQL, Basic Go