

# Zakaria Al-Alie

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## Education

### University of California, Berkeley

May 2029

Bachelor of Arts in Data Science

Regents' and Chancellor's Scholarship Recipient

Leaders for Tomorrow Scholarship Recipient

**Planned Relevant Coursework:** Foundations of Data Science, Program Structures, Data Structures, Calculus II, Multivariable Calculus

### Merritt College, Oakland

Dec. 2024

Dual Enrollment

**Relevant Coursework:** Applications in Info Security, Secure Coding in JAVA and .NET, Python Application Programming, Introduction to Computer Programming, Introduction to Physics

## Projects

### xView2 Building Damage Assessment

Apr. 2025 - June 2025

- Automated building damage assessment from **Maxar satellite imagery** using **PyTorch**, processing **850K+ buildings** across 15 countries and 6 disaster types
- Developed a two-stage deep learning pipeline with **U-Net** for building localization and a **CNN** for classifying **four damage levels**: undamaged, minor, major, destroyed
- Achieved **84.4% weighted F1 score**, including **92% F1 (undamaged)** and **72% F1 (destroyed)**
- Built **CUDA-accelerated inference** with precision, recall, and confusion matrix reporting, along with disaster visualizations to aid humanitarian response

### BerkeleyBets, CalHacks Hackathon

June 2025

- Built full-stack sports analytics platform serving **150+ athletes** across NBA, NFL, and MLB using **React** (8 components, 4 pages) and **Express.js REST API**
- Processed **15,000+ samples** from **1,419 player-seasons (2023-2024)** with position-specific **Random Forest models** using **temporal validation** to prevent overfitting
- Implemented real-time player lookup system with fuzzy search capabilities (**Fuse.js**) and dynamic routing (**React Router**), featuring **predictive analytics dashboard** with **live simulation betting**

## Leadership and Extracurricular Activities

### Community Tutor and Volunteer, Oakland Islamic Center Mosque

Sept. 2020 - Present

- Mentored **100+ youth**, focusing on academic support and community engagement
- Hosted community events and distributed **500+ plated meals** during **Ramadan**
- Organized **cleaning** and **restoration efforts** for mosque facilities

### Varsity & Club Soccer, Emery Secondary School & Bay Area United Academy

Aug. 2021 - Aug. 2025

- Captained varsity team to **North Coast Section semifinals** as center back, and **mentoring teammates** to maintain academic eligibility standards
- Created defensive strategies and **team cohesion** in high-level academy competition at Bay Area United

## Skills

**Languages:** Python, JavaScript, Java

**Libraries/Frameworks:** PyTorch, scikit-learn, OpenCV, NumPy, pandas

**Web Technologies:** React, Express.js, REST APIs, Firebase

**Tools:** Git, Jupyter, Google Colab, VS Code

**Databases:** MySQL, NoSQL