

# 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

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

### Merritt College, Oakland

Dec. 2024

Dual Enrollment

GPA: 3.86/4.0

**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 - Present

- Automated building damage assessment from **Maxar satellite imagery** using **PyTorch**, processing 850K+ buildings across 15 countries and 6 disaster types
- Created a **two-stage deep learning architecture**: U-Net building localization and CNN damage classifier achieving **84.4% weighted F1** with strong performance on critical categories (**92% F1 undamaged, 72% F1 destroyed**)
- Built **CUDA-supported inference** with **evaluation metrics** (precision, recall, confusion matrices) and **disaster visualizations** to support humanitarian response

### BerkeleyBets, CalHacks Hackathon

June 2025

- Built **full-stack web application** using **React**, **Express.js**, and **Firebase** for sports performance prediction and analytics across NBA, NFL, and MLB
- Developed **REST API backend** integrated with **scikit-learn ML models** trained on multi-season player statistics and historical game data
- Implemented **real-time player lookup system** with fuzzy search capabilities using **Fuse.js** and dynamic routing with **React Router**, featuring predictive analytics dashboard with performance tracking

## 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 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, developing defensive systems 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, Matplotlib

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

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

**Databases:** MySQL, NoSQL