

# Moustafa Ghanem

949-668-3004 | [maghanem@uci.edu](mailto:maghanem@uci.edu) | [Portfolio](#) | [LinkedIn](#) | [GitHub](#)

## EDUCATION

### UC Irvine

Irvine, CA

B.S. in Computer Science, Specialization in **Artificial Intelligence**; Minor in **Entrepreneurship**

Sep 2022 – Dec 2026

#### Dean's List (5 quarters)

**Relevant Coursework:** Data Structures and Algorithms, Machine Learning, Artificial Intelligence, Software Testing, Project Management, Information Retrieval, Linear Algebra, Discrete Mathematics

## EXPERIENCE

### Undergraduate Research Assistant

Jul 2025 – Present

BIASLab UCI

Irvine, CA

- Conduct research on **brain-inspired computing** and **secure embedded systems** under Dr. Mohammad Imani.
- Prototype and evaluate **hyperdimensional computing models** in **PyTorch**, improving classification accuracy.
- Collaborate with graduate researchers to design experiments and analyze results for **publications**.

### Teaching Assistant

Sep 2023 – Present

UC Irvine

Irvine, CA

- Supported **400+** students in **Python** programming through code reviews, feedback, and office hours.
- Delivered instruction on **OOP**, algorithm analysis, generators, and functional programming.
- Worked with faculty to refine course materials and address common student challenges.

### Software Engineering Intern

Jul 2024 – Sep 2024

Brightskies Technologies

Remote

- Developed a **face recognition** and attribute detection system using **PyTorch** and **OpenCV**.
- Trained **deep learning models** to classify emotions, gender, and alignment with **96% accuracy**.
- Optimized **ResNet**-based feature extraction pipeline, reducing inference time by **20%**.

### Microsoft Shadowship Program

Apr 2024 – May 2024

Microsoft

Remote

- Selected for a **competitive mentorship program** focused on technical career growth and industry exposure.
- Shadowed **engineering teams** to learn about **system design**, **cloud infrastructure**, and collaboration.
- Participated in resume reviews, mock interviews, and technical workshops with **Microsoft engineers**.

## PROJECTS

### Roommate Manager App | React Native, Firebase, Firestore, Expo

Aug 2025

- Developed a cross-platform app to track bills, rotate chores, and manage expenses for shared households.
- Implemented **Firebase** Authentication and **Firestore** for secure login and real-time syncing.
- Designed a mobile-first UI for smooth performance across iOS and Android.

### TawzeefMD - Medical Job Platform | React, TypeScript, Node.js, PostgreSQL, Docker

Jul 2025

- Built a job platform for medical professionals with posting, search, and application tracking.
- Developed **PostgreSQL** database with Prisma ORM, Redis caching, and **Docker** for scalability.
- Created a responsive UI with **Tailwind CSS** and secure authentication workflows.

### SMS Sports Score App | Python, Flask, Twilio, API-Basketball, ngrok

Jul 2025

- Developed an SMS-based app that retrieves and sends live sports scores and stats on demand.
- Implemented query parsing for **dates**, **teams**, and **players**; deployed locally using **ngrok**.
- Built modular **API** handlers for easy expansion to additional sports providers.

### House Price Predictor | Python, Pandas, Seaborn, Matplotlib, NumPy

Jul 2024

- Created a **regression model** predicting house prices with **94% accuracy** on 1,500+ homes.
- Performed data cleaning and **feature engineering**, reducing features from 80 to 38.
- Evaluated models using **RMSE**, **MAE**, and visual analytics to optimize predictions.

### Trailblazer Biking Trail Finder App | React, React Bootstrap, Ant Design, MongoDB

Feb 2024

- Developed a **full-stack** web app to search, filter, and explore **1,000+** biking trails with maps and details.
- Built a responsive UI with **React**, **Bootstrap**, and **Ant Design**, backed by **MongoDB Atlas**.
- Integrated **Google Cloud API** for route info, terrain data, and interactive map overlays.

## TECHNICAL SKILLS

**Languages:** Python, Java, C/C++, JavaScript, TypeScript, HTML/CSS, SQL, R

**Frameworks/Tools:** React, Node.js, Flask, PostgreSQL, Firebase, Git, Docker, Linux

**Libraries:** PyTorch, NumPy, Pandas, Matplotlib, Scikit-Learn, OpenCV, Seaborn, BeautifulSoup

**Concepts:** Machine Learning, Computer Vision, Full-Stack Development, Unit Testing, Data Science

## ORGANIZATIONS

**Co-Founder** – Egyptian Student Association, Hack at UCI, Chess Club, AI at UCI