

Firas Alshami

Permanent US Resident in Irvine, CA

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Education

California State University, Fullerton
Bachelor of Science in Computer Science
Major GPA: 3.92

Completed May 2025

Work Experience

Lead Research Assistant

June 2024 - July 2025

Supportive Housing Project

- Led a 5-person development team applying Agile and CI/CD practices to build an Android (Kotlin) app and IoT devices for supportive housing partners.
- Delivered the system 3 weeks ahead of schedule to partners housing over 20,000 residents, securing over \$2 million in funding.
- Built and deployed a secure Express + Node.js REST API with a local SQLite database safeguarding resident data.
- Programmed ESP32 and Arduino microcontrollers in C++, reducing device-app latency to less than 200 ms for real-time performance.

Projects

Chess Board Recognition | Python, OpenCV, TensorFlow, React, Node.js

- Built a full-stack web tool to analyze online chessboard images and return live positions.
- Deployed an end-to-end pipeline with React and a Express + Node.js REST API, achieving ~1.3 s average latency, including model inference.
- Designed and containerized a FastAPI microservice hosting the TensorFlow model for scalable inference.

Mastermind Trivia Game | React, Next.js, Typescript, TailwindCSS, AWS, Python

- Built a real-time multiplayer trivia app with a Next.js frontend and AWS serverless backend.
- Implemented server-side rendering and serverless hosting for low-latency gameplay.
- Designed cloud backend using Step Functions, Lambda, and API Gateway; stored game data in DynamoDB + S3.

Soccer Pass Prediction | Python, TensorFlow, Pandas, Numpy, Matplotlib

- Developed a TensorFlow model predicting soccer pass success (xPass) with ROC-AUC 0.75 and Brier 0.09.
- Integrated model into a React + Node.js dashboard delivering real-time predictions.
- Created REST Endpoints for visualizing and filtering pass probabilities from match data.

Skills

- **Languages:** JavaScript/TypeScript, Python, SQL, Kotlin, HTML, CSS, Tailwind CSS, C++
- **Frameworks/Libraries:** React, Next.js, Node.js, TailwindCSS, TensorFlow, OpenCV, Express, FastAPI
- **Tools & Platforms:** Git, AWS, Docker