

Mark Amirkhan

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Portfolio: markbuilds.pages.dev

EXPERIENCE

Concordia UK

Machinery Technician

May 2021 - Nov. 2021

Stafford, United Kingdom

- Worked with packaging **machinery**, **production software**, and labeling systems.
- Operated and monitored automated manufacturing equipment for cardboard box production and assembly.
- Operated conveyor-based production equipment and water pressure regulation systems.
- Performed equipment inspections and basic **troubleshooting** to maintain efficient operation.

Concordia UK

Logistics and Supply Chain Coordinator

June 2021 - Nov. 2021

Stafford, United Kingdom

- **Coordinated** transportation logistics and resource distribution across multiple sites.
- Maintained **operational databases** and production records.

Physics: Electricity and Magnetism Lab

Coursework

Jan 2026 - June 2026

Los Altos Hills, California

- Conducted **hands-on** experiments in physics labs as part of coursework.
- Worked with **circuits**, **oscilloscopes**, **voltmeters**, **multimeters**, **diagrams**, **power supplies** and **data collection**.

PROJECTS

Echelon: Incidents Operational Platform (Software)

- Real-time operational intelligence platform that ingests images of **incidents** and runs **multi-threat detection** (fire, structural damage, traffic anomalies) using **YOLOv8**. After the analysis, **LLM** generates situational briefings with risk assessments and response recommendations. A **dependency graph** engine maps **cascading failure** impacts across connected infrastructure so operators understand the full picture, not just the immediate incident.

The Grid: Logistics Command Center (Software)

- A geospatial **logistics** and **supply chain** platform that prioritizes food-bank requests, allocates warehouse inventory, assigns trucks, and visualizes optimized Bay Area delivery routes with automatic inbound-recovery planning for **supply shortages**.

Melanoma Clinical Decision-Support System (Software)

- Engineered a three-stage **ML** pipeline analyzing dermoscopic images and patient EHR history, fused into a confidence-weighted 0 - 100 melanoma risk score. Ran multiple **AI models** in parallel and delivered structured physician reports with risk flags and triage recommendations.

EDUCATION

De Anza College

Associate of Science in Computer Science

2026

Cupertino, CA

San Jose State University

Bachelor of Science in Software Engineering

2028

San Jose, CA

SKILLS

Languages : Python, C++, JavaScript, HTML/CSS, SQL (PostgreSQL, MySQL)

Tools : FastAPI, PostgreSQL, SQLAlchemy, OpenCV, YOLOv8, NumPy, OpenAI API, WebSockets, JWT, Docker, Git, GitHub, Render, React, Voltmeters, Multimeters, Power Supplies, Oscilloscopes