OMAR SAED YOUNIS

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EDUCATION

California State University, Fullerton   Fullerton, CA
Master of Science in Computer Science   *Graduation Date: May 2026*

Worcester Polytechnic Institute   Worcester, MA
Bachelor of Science in Mechanical Engineering, Minor in Aerospace Engineering   *Aug. 2012 – May 2016*

EXPERIENCE

Software Engineer Intern   May 2024 – Aug. 2024
Qualcomm – Internship   *San Diego, CA*
- Responsible for gathering requirements and industrializing ETL pipelines on AWS from key stakeholders.
- Created ETL pipelines to process 1 million data points per minute for ML teams, to utilize and analyze Big Data.
- Improved features development and testing by 40% by implementing a logging, monitoring, and alerting solution on ETL pipelines.

Instructor/Teaching Associate – Computer Science Department   Jan. 2024 – May 2024
California State University, Fullerton   *Fullerton, CA*
- Instructed undergraduate course for Object-Oriented Programming in C++.

Software Engineer Intern   Aug. 2022 – Nov. 2022
Elemeno AI – Internship   *Remote*
- Utilized SQL to manage and analyze Big Data, performed exploratory data analysis (EDA) and developed strategic roadmaps to create and deploy client-specific neural models on Google Cloud.
- Enhanced predictive accuracy of package delivery times by 25% by conducting comprehensive data analysis, designing efficient pipelines for tabular data, and successfully training a feed-forward neural network.

Lead Mechanical Engineer – R&D Department   Feb. 2019 – May 2021
D&K Engineering   *San Diego, CA*
- Led a team of 20 in the successful development of ecoATMs earning a $1 million contract extension.
- Enhanced in-house efficiency by 50% by developing a diverse range of Python-based productivity tools.
- Accelerated project timelines by 4 times by providing efficient CAD, design, and drawing support with SolidWorks.

Member   May 2015 – Present
United States Coast Guard Auxiliary – Flotilla Staff Officer Operations (Jan. 2021 – Jan. 2026)   *San Diego, CA*
- Conducted training and participated in a number of successful search and rescue operations.
- Developed a productivity tool in Python for accessing and summarizing pilot training data, adopted fleet-wide across all Coast Guard Air Stations nationwide; received Coast Guard Auxiliary Achievement Medal.
- Created an aircrew training tracker tool in Python and Excel VBA to help Coast Guard Aircrewmen stay current on their training requirements.
- Pioneered and established an efficient inventory system and database in Python within a team to enhance the Coast Guard's helicopter maintenance operations, resulting in an impressive 85% reduction in search time; the system is currently in operation at Coast Guard Air Station San Diego.

PROJECTS

Nahtadi – Islamic Prayer Times iOS App | *Swift, SwiftUI, SwiftData, iOS, App Store*   Aug. 2025 – Jan. 2026
- Developed and published an iOS app on the App Store that calculates the five daily Islamic prayer times using astronomical algorithms and provides Qibla direction.
- Built with SwiftUI and SwiftData featuring multiple calculation methods, Hijri calendar, prayer notifications, and offline capability.

Mini Compiler | *Python, LL(1) Parser, AST, Pytest, GitHub Actions, CI/CD*   Aug. 2024 – Dec. 2024
- Built a production-quality compiler transforming a Pascal-like language to executable Python code with table-driven LL(1) predictive parser, semantic analysis with variable tracking, and AST-based code generation.

- Includes 78 comprehensive tests with 71% coverage, CI/CD with GitHub Actions, complete type hints, and modular architecture with zero external dependencies.

Image Watermark Remover | *PyTorch, Pix2Pix, Deep Learning, Computer Vision*   Jun. 2022
- Implemented a Pix2Pix generative adversarial network using PyTorch to automatically eliminate watermarks from digital images; trained on 16,700+ watermarked images from the Unsplash dataset.

American Sign Language Letter Detector | *Python, Streamlit, YOLOv5, Computer Vision*   Sep. 2021 – Oct. 2021
- Created a lightweight app that detects ASL letters from images or video to help students practice hand positions; uses a retrained YOLOv5 model for real-time object detection.

Collision Avoidance Radar Plotting App | *Python, Streamlit, Matplotlib, NumPy, Pytest*   May 2024 – Present
- Developed an educational Python application for maritime navigators to train in collision avoidance calculations using radar plotting techniques; computes Closest Point of Approach (CPA) and determines required course/speed changes.
- Built for Coast Guard Auxiliary training with live Streamlit deployment and comprehensive test coverage.

CERTIFICATIONS

Cloud: AWS Knowledge: Serverless (AWS), Google Cloud Computing Foundations Certificate (Google Cloud), Build a Secure Google Cloud Network Skill Badge, Implement Load Balancing on Compute Engine Skill Badge, Prepare Data for ML APIs on Google Cloud Skill Badge, Set Up an App Dev Environment on Google Cloud Skill Badge
Academic: CSX0003: Algorithms: Design and Analysis, Part 1 (StanfordOnline)
Engineering: Certified SolidWorks Associate - CSWA (Dassault Systèmes)
Other: Introduction to FinOps (FinOps Foundation)

TECHNICAL SKILLS

Languages: Python, Swift, C++/C, JavaScript, SQL
iOS/Apple: SwiftUI, SwiftData, Xcode, XCTest, iOS Development, App Store Publishing
ML/AI: PyTorch, TensorFlow, Keras, Scikit-Learn, OpenCV, YOLOv5, Deep Learning, Computer Vision, NLP
Web/Tools: Streamlit, REST APIs, Matplotlib, NumPy, Pandas
Cloud/DevOps: AWS (Lambda, DynamoDB, S3), Google Cloud, Apache Spark, Docker, GitHub Actions, CI/CD
Databases: MySQL, Amazon DynamoDB, PostgreSQL