

Mohammed Owda

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EDUCATION

Western University

BESc, Software Engineering — CGPA: 82%

London, ON

Sept 2023 – Apr 2027

- **Dean's Honour List** – Faculty of Engineering, Western University (2024–2025)

TECHNICAL EXPERIENCE

Western University – Intelligent/Autonomous Systems Lab

London, ON

Undergraduate Research Assistant

May 2025 – Present

- Built a **multiview AI dashboard** for thermal + RGB streams (Next.js + **FastAPI**, WebSockets) with **real-time YOLOv11 overlays** and event logging
- Developed a **ROS 2 (rclpy)** pipeline with parameterized launch files for **dynamic multi-camera discovery**, synchronized topics, and detection message publishing

DECO Repair

London, ON

Sales Representative

Apr 2024 – Sept 2024

- Generated **\$13,000+ in sales**, consistently exceeding daily targets through effective customer engagement and upselling

PROJECTS

Autonomous Thermal Object Detection | YOLOv11, Raspberry Pi, NCNN, Federated Learning

Mar 2025 – Apr 2025

- Optimized YOLOv11 using FP16 quantization, 20% pruning, achieving a **mAP of 74%** processing 10 pictures in 0.625s
- Prototyped client/server federated learning (Flower) with ONNX models; measured accuracy vs bandwidth trade-offs

QCare: ER Virtual Waiting Room | React, Vite, Flask, SQLAlchemy, UI/UX, OpenAI

Feb 2025 – Mar 2025

- Built an AI-assisted triage & queue system with clinician dashboard and live updates to streamline ER intake
- Engineered a **real-time patient triage system** using **OpenAI** and **CTAS** for automated assessment

Vinculum | React, Node.js, WebSockets, WebRTC, Pixi.js

Nov 2024 – Dec 2024

- Engineered a **real-time collaborative** web application that **supports multiple users** interacting in a **shared virtual environment** with synchronized movements and voice chat using **WebSockets**

E-Commerce Platform for Western Baja | React, Node.js, PostgreSQL, CSS, Docker

Sept 2024 – Oct 2024

- Formulated **RESTful APIs** to handle backend operations, including user registration, login, and orders (100+ projected)

LEADERSHIP & AWARDS

Western Engineering Competition (WEC)

London, ON

Vice President of Technical Operations

Mar 2025 – Present

- Built and maintained the website and LMS pages, handling **650+ registrations** throughout the event weekend

Engineers Without Borders, Western Chapter

London, ON

Vice President of Projects

Sept 2023 – Present

- **Led project teams** to design and implement sustainable engineering solutions for underserved communities
- **Promoted STEM education** through workshops and interactive sessions, reaching over **200 participants**
- **Organized a Sustainability Hackathon** to align EWB's mission with innovative solutions, **100+ hackers**

Western Foot Patrol

London, ON

Operations Manager

Oct 2024 – Present

- **Oversaw daily operations** and scheduling to ensure campus safety services ran efficiently

RBC Design Thinking Program

London, ON

Participant

Aug 2025 – Present

- Collaborating in a multidisciplinary team to apply design thinking principles and develop solutions for RBC mentors and professionals

1st Place - Western Engineering Automotive Innovation Challenge in partnership with General Motors & OVIN

1st Place - Western MSA Hackathon, SinaAI Stream (QCare - Virtual ER Triage)

1st Place - HackWestern Hackathon, Canada Life Stream (Vinculum - 2D Virtual Environment Web Application)

TECHNICAL SKILLS

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

Frameworks/Libraries: React, Next.js, Node.js, Express.js, SQLAlchemy, Pandas, Matplotlib, Tailwind CSS

Robotics & Computer Vision: ROS 2, OpenCV, YOLOv11 (NCNN/TensorRT basics)

Cloud & DevOps: AWS (EC2, S3, IAM), FastAPI, REST, WebSockets, Docker, Git/GitHub, Pytest