MOHAMED ABUBAKER

Famagusta, North Cyprus   mohammedaliedriis@gmail.com   **[Github](#)**   **[Linkedin](#)**

Software Engineer specializing in **robotics**, **embedded systems**, and **full-stack mobile development**. Skilled in **Flutter**, **Python**, **C**, **Dart**, **Docker**, and **Firebase**. Experienced in optimizing **mission-critical systems** and deploying real-time applications. Holds an **Honors degree** in **Electrical and Electronic Engineering**, with leadership experience and award-winning projects in **IoT** and **AI**.

WORK EXPERIENCE

Software Engineer
Nov 2024 – Current

Caretta Robotics, Famagusta, Cyprus

- Optimized ROV Control: Enhanced the ROV's control system, reducing command response latency by approximately 15% in dynamic environments.
- Data Integration: Processed and fused data from 5+ different sensors to create accurate 3D environmental maps, improving situational awareness.
- Simulation & Validation: Employed simulation software to validate control mechanisms, leading to a 10% increase in system reliability.
- AI Model Enhancement: Refined MobileNet-based object detection models, achieving a 12% improvement in precision on mission-critical tasks.

Software Engineer Intern
Jun 2024 – Oct 2024

Caretta Robotics, Famagusta, Cyprus

- Data Accuracy Improvement: Cleaned and manipulated a dataset of over 26,000 records, resulting in a 20% increase in model accuracy.
- Model Training: Trained and fine-tuned object detection and classification models that supported a 15% boost in performance.
- Sensor Data Integration: Developed modules to consolidate data from 4+ sensor types, enhancing 3D mapping accuracy by 18%.

Software Developer Freelancer
Apr 2023 – Jun 2024

Khartoum, Sudan

- Team Leadership: Led a team of 4 developers, streamlining task assignments and reducing project cycle times by 25%.
- Requirements & Design: Authored comprehensive Software Requirements Specifications (SRS) and designed scalable database architectures, setting the stage for a 30% improvement in system scalability.
- Mobile App Development: Built cross-platform mobile applications using Flutter and Firebase, resulting in a seamless user experience and a 20% faster response time compared to previous implementations.

PROJECTS

- **Smart Indirect Evaporative Cooling** ([Markoni](#)): Designed an IoT-enabled cooling control system with an ESP32, sensors and a website, reducing energy consumption by 20% and manual intervention by 40%.
- **Real-Time Bus Tracking** ([MyBus](#)): Developed a Flutter/Firebase mobile app with Google Maps API to track 5+ bus routes in real time.
- **Water Trash Collector**: Engineered a semi-autonomous ROV for waste collection; implemented a YOLOv5n-based detection model on Raspberry Pi, cutting processing delays by 25% and boosting recognition accuracy by 15%.

EDUCATION

Bachelor of Science (BSc) in Electrical and Electronic Engineering (Honors Student)   **Jan 2025**
Eastern Mediterranean University, Famagusta, North Cyprus ([EMU](#)) (Transfer)

Bachelor of Science (BSc) in Electrical and Electronic Engineering   **Sep 2023**
University of Khartoum, Khartoum, Sudan

AWARDS, INVOLVEMENT AND CERTIFICATIONS   [CERTIFICATES – GOOGLE DRIVE](#)

- **Best Graduation Design Project** of Fall 2024-2025 semester, Electrical and Electronic Engineering, Eastern Mediterranean University **2025**
- **Volunteer**, Assisted in cleaning parks and streets, contributing to community beautification efforts. Famagusta Municipality **2024**
- **Chairman of The Student's Society of Electrical and Electronic Engineering**, Electrical and Electronic Engineering, University of Khartoum **2023**
- **Vice President of Public Relations office**, Steering Engineering Association, University of Khartoum **2022**
- **Flutter Development Course**, Google Developer Student Club, University of Khartoum branch, Google **2022**

SKILLS

Programming languages: Python, C, Dart, SQL.

Frameworks and technologies: Flutter, Tensorflow, Docker, Colab, Github, Arduino, PLCs, Firebase, Raspberry Pi, Computer Vision, MATLAB Simulink.

Languages: Arabic (Native), English (Professional).