

# Omar Hamza

Kuwait | +965 66 77 0690 | o.hamzah@hotmail.com  
in/omarmhamza | www.omarhamza.me | github/omarmhamza

## PERSONAL SUMMARY

**'A technically adept and bilingual Software Engineer professional, possessing over 3+ years' influencing long-term business goals by accelerating technological-driven outcomes into operational value.'**

Provides oversight, direction, and technical partnerships for projects. Anticipates problems and implements analytical and reporting capabilities for operations. Confident communicating at stakeholder level, to help drive long-term goals through the design, development, testing and implementation of projects for enterprise-wide initiatives. Remarkably composed and professional with the ability to remain calm under pressure, manage multiple priorities and support project roadmaps in order to implement robust technological capabilities to help draw assumptive conclusions.

## KEY SKILLS

- Robotic Operating System
- Business Intelligence
- Full Stack Engineer
- Stakeholder Management
- Software Development
- Solution Architecture
- Reporting Frameworks & Tools
- Governance, Policies & Procedures
- Project Management
- Technical Solutions
- Quality Assurance
- System Architecture

## CORE COMPETENCIES

### Operational Management:

- Monitors the development progress throughout each operation to ensure it is within scope and budget.
- Identifies potential project risks and develops a mitigation plan to resolve potential issues and backlogs.
- Manages the insight and opinions of stakeholders and help to agree on the current scope and roadmap of operations.
- Delivers adaptable tailored solutions with consideration for short- and long-term business impacts.

### Leadership:

- Consensus-driven communicator who delivers credibility, maturity and gravitas for projects.
- Remains abreast of industry standards and best practices; updates policies and procedures accordingly.
- Empowers multidisciplinary teams, resolves problems, builds a culture of teamwork and continuous improvement.
- Accustom to working in high-pressured environments while adhering to strict policies, timelines and procedures.

## CAREER HISTORY

### Revotonix, Lebanon – Robotics Software Engineer (Full Time)

Jul 2020 – Present

Collaborated on a Zenoe disinfection robot developed by ASTI, developing several ROS packages and test suite for the autonomous navigation system and the GUI. Worked remotely with several teams and reported directly to the CTO.

- Developed SLAM mapping packages using Python (ROS).
- Evolved the map storage services and integrated it with MongoDB database.
- Created a test suite to review different mapping processes in the development process.
- Oversaw data processing methods to facilitate information to a GUI using rosbridge and roslibjs.
- Developed navigation mission manager to enable the robot to fulfil pre-determined tasks using Python.
- Created and executed deployment strategies using docker containers (docker-compose).
- Created and designed API interfaces to interact with other services.

### CNC Lab, Lebanon – Mechatronics Engineer (Internship)

Jul 2019 - Aug 2019

Accountable for preparing a batch of in-house IoT devices to be distributed in local petrol stations. Provided specialist technical support including programming, testing and repair.

- Managed setting up IoT devices firmware and managed hardware installation of IoT devices.
- Debugged remote IoT servers and modelled IoT device installation using CAD software.
- Collaborated with system engineers and assisted in resolving minor bugs.

**PERLA Tissue Manufacturer, Lebanon – Automation Software Engineer (Internship)****June 2019 - July 2019**

Tasked with implementing solutions to monitoring Perla machines' performance (some of which were legacy machines). Oversaw an IIoT system that could monitor all the hardware devices and provide instant feedback to the technicians as well as producing reports that can assist in delivering predictive maintenance.

- Built desktop software and a back-end system to streamline procurement processes, using C# and Microsoft SQL.
- Constructed a web application system that monitors RPM and other information using sensors.
- Developed system architecture for system nodes to communicate with each other.
- Created the back-end system for the web application (PHP - Laravel framework).
- Created the front-end (Bootstrap CSS, barebones JavaScript, jQuery and AJAX).

**PROJECTS (Further Details on Request)****Quick Sync Me****Jan 2021 - Present**

- Strategically developed a peer-to-peer file sharing service in your browser.
- Creator of Quick Sync Me, developed back and front end.
- Tech stack: Vue.js, Python Flask, MongoDB, Socket.io, WebRTC

**Robotic Arm Sorting Operation using Machine Learning & Computer Vision****Jan 2020 - July 2020**

- Evaluated object detection needs and trained ML model using Python-Tensorflow.
- Developed and implemented a threaded software system design for the sorting process.

**Multi-Agent Search on Pac-Man Game****Apr 2020 - Apr 2020**

- Created and applied A\* search algorithm to different Pac-Man game types using Python.
- Tested and reported on usage of different search algorithms.

**Autonomous RC-Car [Robotics Competition Product]****Dec 2018 - Jan 2019**

- Implemented lane detection system using computer vision and Python (OpenCV, matplotlib and NumPy).
- Used Haarcascades for object detection (detect traffic lights and stop signs).

**Table Service Ordering Application for Fast Food Restaurants****Nov 2017 - Dec 2017**

- Programmed back-end logic and facilitated database communication using C#.
- Worked with team members to design the UI components while integrating tablet self-order functions using C#.

**EDUCATION AND TECHNICAL PROFICIENCIES****University of Balamand****2016 - 2020**

- Bachelor of Technology in Mechatronics Engineering

**Technical Skills:****Programming Languages & Technologies:**

Python (Frameworks: ROS, Flask, FastAPI), C, C++, C#, Java, HTML, CSS (Frameworks: Bootstrap, Bulma, Vuetify) SQL (MySQL/ Postgres), NoSQL (MongoDB), JavaScript (Frameworks: Vue.js), Assembly, MATLAB, MB4, Web Technologies (WebRTC, web sockets & server-side-events), Nginx

**Software & Tools:**

Rviz, Gazebo, Simatic S7, Office365, Microsoft Project, Visual Studio, AutoCAD, Quartus, ModelSim, CIROS Proteus MPLABX, LabView, Cisco Packet Tracer, LabVolt, Multisim, PhpStorm, PyCharm, Docker, Putty, Version Control (git), GitKraken, Stripe CLI & API, Postman

**AWARDS & CERTIFICATIONS**

- CompTIA Security plus – 2021
- National Bank of Kuwait Hackathon 2<sup>nd</sup> Place - 2021
- The Computer Engineering Society Kuwait (CPSE) Game Jams 3<sup>rd</sup> Place - 2021
- The Construct ROS for Beginners – 2020
- CCNA Routing and Switching: Introduction to Networks – 2019

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- University of Balamand Honors Dean’s List – 2018 - 2020

## **ADDITIONAL INFORMATION**

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Languages: Arabic (Native) • English (Fluent) | Full Driving License | References on Request