

# Mohammad Atrouz

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## Education

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### University of Essex, UK

BEng Electronic Engineering with Honours Class I | Sept 2019

**Courses:** Robotics, C Programming and Embedded Systems, Analogue Circuit Design, Digital Systems Design and Digital Electronic Systems, Computer Vision, Signal and Digital Signal Processing, High Level Digital Design (FPGAs), Engineering Electromagnetics, Network Fundamentals (CCNA 1)

## Experience

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### Techno World, Jordan | Embedded Software Engineer | Feb 2021 - Jan 2023

- Knowledge of SDLC stages and process
- Performed sensor integration in real time embedded systems (Soft RTOS) running Linux OS
- Experience in programming in C++, Matlab and Python
- Worked with GNSS, Wifi, Bluetooth and Cellular communication and standards
- Exposure to communication protocols: SPI, I2C, UART, USB
- Used OpenCV in QR code scanning

### Encoding Arabia, Jordan | Software Engineer | Nov 2019 - Feb 2021

- Worked with single board computers running Linux OS
- Programming in C, C++, Python
- Used communication protocols: SPI, I2C, UART, USB to communicate with different sensor modules
- Performed sensor integration in embedded systems

### Kabshak.net, Jordan | Flutter developer (contract - part-time) | Jul 2022 - May 2023

- Flutter development, testing and integration for Android, iOS and MacOS application
- Knowledge of SDLC stages and process (CI & CD)
- Flutter state management

### venues.me, Kuwait | Flutter developer (contract - part-time) | Jan 2022 - Jul 2022

- Flutter development, testing and integration for Android, iOS and MacOS application
- Knowledge of SDLC stages and process (CI & CD)
- Flutter state management

### UK data archive, UK | Internship | Summer 2019

- Experience in data research
- Data analysis, reporting and visualisation

## Research, Projects and Hobbies

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### Capstone Project, University of Essex | Countering Drones | 2018 - 2019

- Analysis of the datalink between drones and controllers using Software Defined Radio (LimeSDR)
- Analysis and spoofing of GPS signal
- Matlab experience
- RF jamming, amplification and transmission, Circuit and PCB design
- 3D design and printing using Autodesk Fusion 360, PLA and ABS

### Drone & robots building and programming hobby

- Knowledge in communication protocols and standards such as SPI, I2C, UART, USB, Wi-fi, Bluetooth
- Exposure to ROS in conjunction with Python, C++, OpenCV
- Circuit and PCB design in Autodesk Eagle
- 3D design in Autodesk Fusion 360 and 3D printing using PLA, ABS, PETG and TPE

## Skills

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- Language Fluency:
  1. English (University Degree Studies in English, IELTS 7.5)
  2. Arabic (Native)
  3. Russian (Native)
  4. Spanish & French (Basic)
- Coding: Python, Java, C, C++, MATLAB, Flutter and MySQL.
- Protocols: SPI, I2C, UART, USB, Ethernet
- ROS2 experience
- SDLC Tools: GIT, GitHub, Jira, SCRUM.
- 3D design and printing skills (Autodesk, Fusion 360, AutoCAD)
- Familiarity in working with micro-controllers and FPGAs (MBED and Basys3)
- Understanding of electronics and electromagnetic theory and practical knowledge in both fields.
- Theoretical and Practical knowledge working with various hardware such as soldering (through hole and SMD), and generation and measurement tools, such as oscilloscopes, signal generators, spectrum analysers, and (VNA) Vector Network Analysers.
- Computer skills: MS office suite, Adobe suite (Photoshop, Illustrator etc), data presentation and reports
- Data analysis: Python, R programming, MATLAB
- Networking: Cisco CCNA 1, OSI, TCP/IP, Wireshark knowledge.
- Working with a team or individually on a project utilising planning and management techniques and tools such as "Waterfall, Agile, JIRA, etc" and adhering to guidelines for example health and safety