Mr Hamid Jamal

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As a final-year Computer and Electronic Systems student at the University of Strathclyde, I possess a solid understanding of key engineering concepts. I bring a can-do attitude and resilience to overcome challenges throughout my studies, balancing demanding coursework with my sporting commitments.

Education

Sept 2022 – Aug 2026 **University of Strathclyde**

Computer & Electronic Systems (MEng Hons)

- 4th year Modules: Advanced Microcontrollers, Computer Security, Robotics, Digital Signal Processing
- 3rd year Modules: Building Software Systems, Further VHDL and FPGA Design, Analogue and Digital System Design, Functional Programming, Computer Systems and Concurrency, Signals and Communication Systems
- Dissertation topic: Design and assembling a portable mask aligner for photolithographic processes
- On track for Distinction

Sept 2015 – Aug 2022 **Cardiff High School**

- A levels: A*A*A: Computer Science, Mathematics, Physics
- GCSEs: 12 A* to B including English and Mathematics

Projects

Machine Learning certificates

- Completed various courses for certificates in Machine Learning
- Key areas: Machine Learning, NumPy, Python, Jupyter Notebooks

Remote display control via Wi-Fi

- Utilising the display driver for the MSP430, an ESP32 is used to host a Wi-Fi webserver which hosts a GUI allowing for the user. The data is sent via UART onto the MSP430 to update the screen accordingly.
- Key areas: MSP430, ESP32, firmware development, C, Wi-Fi, Bluetooth

Design and create a display driver for GMT020-02

- Used SPI to create a driver for the MSP430G2553 to communicate with a GMT020-02 display via the ST7789 controller chip. Display is now able to display text and change colours.
- Key areas: SPI, driver development, C, MSP430

Custom I2C MPU6050 driver for MSP430

- Created a custom I2C driver for the MSP430G2553 to initialise and communicate with the MPU6050 IMU to receive the data from specific registers
- Key areas: I2C, driver development, C, MSP430

Design and contribute to a coin-retrieval robot

- Manufactured a crane to allow for the retrieval of a coin as well as assist in system unit testing
- Key areas: Arduino, ESP32, CAD, system testing

Design and produce a keypad PCB

- Design and develop prototypes to understand how keyboards work. Specifically, the PCB design stage by manipulating a diode matrix with a RP2040 to get the desired result
- Key areas: KiCad, Electronic theory, RP2040, PCB design

Designing & Implementing a System for Concurrent Online

- Developed a desktop calendar with globally shared and synchronised calendars, allowing users to schedule meetings with other users
- Key areas: Java, Concurrency, Networking protocols, teamwork

Pathfinding turtle

- Design and developed the circuitry required to produce a pathfinding turtle to solve a maze in a group with 3 peers
- Key areas: ESP32, Electronic theory, PCB design, KiCad, teamwork

Design and Implement a University Student Management System

- Design and developed a hierarchical database system which allows for certain uses to execute certain tasks
- Key areas: Java, SQL, databases, teamwork

Employment

Feb 2022 – March 2022 Brand representative Powerforce GB

- Provided detailed explanations of a variety of devices and services available
- Handled a variety of different demographics depending on the location
- Provided on the spot technical assistant in case of emergency
- Skills gained: Customer service, multitasking, teamwork

Nov 2020 – Dec 2020 Temp sales assistant JD Sports Fashion PLC

- Delivered excellent customer service to all customers
- Handled customer enquiries to what product they wish to buy
- Worked as part of a wider team of staff
- Skills gained: Customer service, problem solving, working under pressure

Extra Curriculum

Sept 2024 – Current Treasurer Strathclyde University Powerlifting Club

- Responsible for ensuring that the club has enough funds for the current year
- Coordinate with other members to source transport for competitions
- Organise with other Universities in the Glasgow area for multiple inter-club competitions
- General budget management of the club

Sept 2022 – Aug 2023 Battery head University of Strathclyde Eco-Vehicle

- Lead a team of engineers to develop a battery suitable for the Shell Eco Marathon (SEM)
- Sourced a suitable BMS system, compatible with regulations, for the team to use and helped with the theory of creating an in house active BMS system

Volunteering

June 2021 – April 2022 Retail assistant Cancer Research Wales

- Handled older customers with patience and respect
- Handled and stored card transaction receipts for the shop
- Achieving Gift Aid quotas by reminding customers to use Gift Aid if possible
- Often contributed in ways to make the store more aesthetically pleasing to increase sales