MUGISHA UWIRAGIYE

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Highly enthusiastic, motivated first class graduate mechanical engineering student with excellent leadership and time management skills. Experience in JavaScript, Python and React.js. I am seeking fulfilling graduate software engineering employment that will stretch my analytical, mathematical and creative ability. An effective problem solver looking for novel challenges in a fast-paced industry.

Education

2020   **Futureproof, Full-Stack Development Bootcamp.**

13-week intensive training that covered all aspects of full-stack development. Concepts covered include UI/UX design, RESTful API's, test driven development, SQL & No-SQL databases, Git version control and deployment.

2016- 2020   **University of Exeter**, **MEng Mechanical Engineering.**

First Class Honours. Modules Taken Include: Programming, Mechatronics, Management and Management Science, Company Finance.

3rd Year BEng Project: Designing a Protective Gimbal System for a Miniature UAV and Complimentary Educational Worksheet to Assist Secondary STEM Education.

4th Year MEng Project: Designing and programming a three-axis gimbal-camera system with remote joystick control and self-stabilisation

2009- 2016   **The City of London Academy (Southwark).**

A- Levels: Mathematics (A*), Further Mathematics (B), Physics (B).

GCSEs: 11 A*-A grades including Mathematics (A*), Physics (A*), Further Mathematics (A).

Industry Skills

- Python
- HTML5/ CSS3
- JavaScript

- React.js
- PostgreSQL/ MongoDB
- Git Version Control

Personal Projects

2020   **Password Hasher Mobile Application- React-Native, JavaScript**

Currently in the process of using the VSCode editor and open source developer tool Expo.io to transform my React.js web application in a mobile application in React-Native.

2020   **Password Hasher Web Application: https://w48j2.csb.app/ - React.js, JavaScript, CSS3**

Using React.js in the CodeSandBox environment; I made a password hasher that can be used to turn any weak password for a website into a secure 24-character password and copied to clipboard for use. I utilised hooks to access and change states. A unique one-way password would be created with the user's choice of website and keyword, meaning the same weak keyword could be used to create any number of unique secure passwords. This was made with the SHA-256 cryptographic hash function.

2020   **Scrimba Online Courses- HTML5, CSS3, JavaScript**

Completed Scrimba's "HTML & CSS Crash Course" and "Introduction to JavaScript" courses.

2020   **Remote Controlled Self-Stabilizing Gimbal- Arduino**

After designing and manufacturing a three-axis gimbal-camera system. The Arduino language (C/C++) was used to make it remote joystick controllable in all three axes over Bluetooth Low

Energy. An IMU was used with data-fusion techniques to create a 2-axis self-stabilisation program. This program communicated with the gimbal system motors to continually keep the camera level.

2019 **Joystick Controlled Robot Arm- Arduino**

Using Arduino, I programmed a 6-dof robotic arm that was joystick controlled and responded its environment with automatic shutoff when lighting was insufficient. LDR readings were integrated into the system to continually track light levels.

2019 **Python University Assessments- Python**

Completed various assessments in Python, utilising doc testing, edge case handling, error checking, appropriate control flow, SciPy optimisation, NumPy, Matplotlib and data-structure manipulations. All assessments were graded first class with an average mark of 79%.

Relevant Employment History

Sep 2019- Jul 2020 **Student Community Warden, University of Exeter, Exeter**

Work amongst the community as a bridge between students and local residents, offering advice and services, which requires proficient teamwork. A high level of social awareness is also needed when speaking to people from all walks of life.

Jul 2016- Jul 2018 **Corporate Market Researcher, Quadrangle Research Group LTD, London**

Conducted interviews with senior management members, demonstrating high level inter-professional communication skills. Spoke to over 100 people daily, developing excellent customer service etiquette.

Jan 2015- Jul 2016 **Mathematics Tutor, The City of London Academy (Southwark), London**

Volunteered as an A Level and GCSE tutor. Developed the ability to simplify and explain complex ideas succinctly. On average, tutee's exam performances increased by one grade.

Interests and Achievements

Deputy Head Boy and Senior Prefect, The City of London Academy (Southwark): Worked with the Headmaster and Senior Leadership on resolving students concerns and represented the Academy at functions such as the 2015 Lord Mayor's Banquet. Elected by the entire student body.

Sports: Part of The University of Exeter Men's Basketball Club and competed at a regional level. Certified English Basketball League Level 1 Table Official. Member of Exeter Calisthenics Society.