Omar Abdelrazik

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Education

University of Warwick – BSc Computer Science 1st class (predicted)   **September 2024 - July 2027**

Key Modules: Programming for Computer Scientists, Design of Information Structures, Web Development Technologies

King Edward VI Camphill Sixth Form   **September 2021 - July 2023**

A Levels: Maths – A*, Computer Science – A*, Physics – A

Hamd House School   **September 2019 - July 2021**

GCSE: 9 GCSE's 7-9 including Mathematics (9) and English Language (8)

Work Experience

Intrepid Technology Solutions, *Software Engineer Intern*   **May 2024 - September 2024**

- Developed a dynamic coaching portal using React and TypeScript, improving user interface and functionality.
- Integrated Firebase for cloud storage, enabling scalable storage for 100+ hours of coaching material, supporting future growth.
- Conducted unit testing, improving code reliability by identifying and resolving 10+ critical bugs, resulting in a 20% reduction in post-deployment issues.
- Explored the use of Docker containers and images with an SQL database, improving deployment efficiency by 25% and streamlining system management.

University Hospitals Birmingham, *Data Analyst Intern*   **May 2024 - August 2024**

- Created a comprehensive report on medical referral times by site and specialty using Power BI and SQL in Microsoft SQL Server, reducing reporting time by 40% and improving data accessibility for 10+ departments.
- Analysed 100,000+ records, optimising reporting processes and enhancing decision-making for hospital management.
- Interacted with experienced data scientists, gaining insights into advanced analytics and its implementation in big organisations.

Rolls Royce, *Systems Engineering Work Experience*   **April 2024 - May 2024**

- Shadowed a control systems engineer to understand the role of software in ensuring safety through fast and accurate data transmission between aeroplane engine components.
- Networked with engineers from multiple departments, gaining insight into the importance of cross-team collaboration for effective engineering and safety management.

HausBots, *Robotics Engineering Work Experience*   **July 2022 - August 2022**

- Shadowed a software engineer working on a Python-based control app, discussing techniques to optimise connection time between the app and the wall-climbing robot for real-time control.
- Explored techniques for app abstraction, focusing on user-centric design by simplifying the interface to display only the most relevant information, enhancing usability.
- Conducted in-depth research on materials for the robot's frame and presented findings to the team, strengthening my communication and public speaking skills.

Other Work Experience

University Hospitals Birmingham, *A&E Receptionist*   **February 2024 - Present**

- Manage patient bookings for 30+ patients per shift in a high-pressure Urgent Treatment Centre, ensuring accurate and quick data entry and reducing wait times by 20%.
- Maintain professionalism and adaptability, handling high-stress emergency situations while ensuring efficient service for patients.

Projects

Warwick Hackathon – AI-Driven Chess Training Platform   **October 2024**

- Developed a Python-based chess educational app that integrates with the Chess.com API to retrieve and analyse user game statistics, providing personalised feedback based on historical gameplay data.
- Leveraged an AI agent to analyse gameplay history and identify user weaknesses, tailoring practice recommendations to improve performance in specific areas.
- Integrated the Lichess puzzle database to deliver targeted puzzles aligned with user skill levels and identified weaknesses, enhancing user engagement and skill improvement.

Coaching Portal   **May 2024 - August 2024**

- Developed a coaching portal using TypeScript and React, allowing coaches to record and upload video content via camera and screen recording.
- Integrated Firebase cloud storage to handle 100+ hours of coaching materials, enabling seamless access and scalable data management.
- Implemented unit testing, resolving 15+ bugs and improving platform reliability by 20%, ensuring a smooth user experience during video uploads and playback.

Projectile Motion Simulator   **October 2022 - March 2023**

- Developed a projectile motion simulator using Python, allowing users to input initial height, speed, and angle to visualise motion.
- Implemented physics-based calculations to accurately simulate projectile motion and dynamically display its trajectory.
- Created an intuitive graphical user interface, using Pygame to render real-time motion and draw the projectile's path, enhancing user interactivity and educational value.

Skills and Interests

- **Programming Languages**: Python, Java, JavaScript, HTML, CSS, MySQL
- **Tools & Technologies:** Git, GitHub, Jira, Docker, PowerBI, Linux, Windows, Excel, PowerPoint
- **Interests & Extracurricular:** Tennis, Padel, Football, Reading, Squash, Gym