Zyron Audwyn Dias

Computer Science Student

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Education

BSc (Hons) Computer Science   2017 - Present

University of Warwick (Coventry, UK)

- Expected Graduation in 2020
- First-year mark: 73.2% (*First Class Classification) with the highest mark of 94 in Mathematics.*
- Currently enrolled in courses including Cyber Security, Artificial Intelligence, Algorithms, Software Engineering, Mathematics, Database Systems, Operating systems and computer networks, Web development and Computer Architecture

A-Levels   2015 - 2017

Lampton School Sixth Form (London, UK)

3 A-Levels: Further Maths -A* Maths-A Physics-A

GCSE   2014 - 2015

Kingsley Academy (London, UK)

7 GCSE's A*-C including Maths and English

SSC   2002 - 2014

St. Dominic Savio High School (Mumbai, India)

SSC, securing 91.2%

Projects

Object retrieval and Enemy avoidance robot:

- Engineered a **python** based AI-powered virtual robot to efficiently solve a maze and retrieve Objects while avoiding enemies.
- Used an **Object Oriented** approach to design the robot and to graphically represent the maze as Nodes with different information
- Designed the robot to solve the maze using an offline search algorithm such as **A* search** and retrieve objects using **Dijkstra's algorithm**
- Modified the robot to carry out an offline search algorithm depending on different conditions of the maze.
- Devised several techniques for error handling efficient **debugging**.
- Version control maintained using **Github**

Multi-Threaded Intrusion Detection System:

- Designed and implemented a basic multi-threaded Intrusion detection system for the main purpose of packet sniffing.
- Software developed in **C** programming language
- Used the **libpcap** library to receive packets and strip the outer-most layer of the protocol stack.
- Main features included parsing **Ethernet**, **TCP**, **IP and ARP** headers and detecting Malicious packets including **ARP responses, blacklisted URL, and Xmas Tree scans.**
- Designed a multi-threaded "**Threadpool**" version to ensure the system can handle high data rates.

Expense splitting online web tool:

- Developed an online bill splitting tool for splitting expenses between members or groups.
- Implemented a secure login and registration system.**Used several web security techniques including**

password hashing, encryption techniques, and general web security techniques to ensure the user and developer safety.

- Used **HTML and CSS** for web design and **javascript** to improve the user experience. Engineered the back-end using **SQLite, PHP, JQuery, JSON and AJAX** for inserting and retrieval of data from the database.
- Finishing the product before the deadline helped me manage time efficiently, which was a result of organizing tasks and files for the product.

Artificial Intelligence powered, shortest path finding virtual robot:
- Built an **AI-enabled robot** that finds the shortest path to the target in any maze using **Java.**
- Engineered the virtual robot based on the given specification and implemented several testing methods and evaluation techniques.
- Devised several techniques for error handling efficient debugging.
- Implemented complex algorithms such as **Tremaux's algorithms** to solve the maze along with **data-structures** such as **stacks, arrays and array-lists.**
- Using algorithms and data-structures helped me improve my problem-solving skills.
- Completion of the project before the given deadline motivated me to manage time and organise tasks efficiently.

Technical Skills

- **Programming: Proficient in Java, Python, SQL, C, PHP, HTML, CSS, JQuery/Javascript, Haskel**
- **Operating Systems: Proficient in using Linux, Windows and Mac Operating systems.**
- **Database Systems: Experienced in the use of Oracle, SQLite DBMS.**
- **Collaboration and Management tools: Github, Slack, Microsoft Teams.**
- **Languages: Fluent in speaking and writing English and Hindi**

Achievements

- **Won the Bronze Certificate in the UK Maths Trust- Maths Challenge during the 'A' level 2015.**
- **Won the Bronze certificate in the UK Maths Trust - Maths Challenge during the GCSE's**

Work Experience

Student Tutor   March 2017 - May 2017
Lampton School

- Responsible for assisting students with their academics mostly in the field of mathematics.
- Setting up weekly tasks, assessment, and evaluation.
- Organizing weekly sessions with varied levels of difficulty.
- Held after school sessions for students in the risk of failing or need help with the subject.

Accountant   December 2015 - February 2016
Bhakti Yoga Institute

- Overall responsibility for creating data tables and entering data
- Responsible for using calculative formulas and formulating graphs.
- Responsible for sorting out data in order to improve efficiency in data entry and searching.

Other Experiences

- **Great interest in football as I have represented West London Youth Football Club in the League football tournaments, State of Maharashtra (India) in All India National Football Tournament and my school at an Inter-school level as well as Regional level.**
- **Reading business/ entrepreneurial books and biographies**
- **Strong interest in new mobile phone and computer technologies and how they function.**
- **Participated in various public speaking competitions and debates.**
- **Interested in photography and travel**