# **Zyron Audwyn Dias**

## Computer Science Intern

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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%

#### **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

## **Projects**

#### **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 **SQL**, **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 **Al-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 datastructures such as stacks, arrays and array-lists.
- Carried out a similar project using python and the A\* algorithm
- Using algorithms and data-structures helped me improve upon my problem-solving skills.
- Completion of the project before the given deadline motivated me to manage time and organise tasks efficiently.

#### Virtual Pong game using micro-controllers and an Oscilloscope(Group Project):

- Programmed a micro-controller (ARM Processor) using **C** to create the classic pong game.
- Specification included a moving ball and paddles on an Oscilloscope screen.
- Set up individual goals for members of the team.
- Responsible for making the right evaluation and setting up different testing methods for the game.
- Collaborated on the project using text editor's peer sharing.
- lead the team through the brainstorming sessions where we came up with ideas to write efficient programs, testing and evaluation techniques.

## **Technical Skills**

- Programming: Profeicient in Java, Python, SQL, C, PHP, HTML, CSS, JQuery/Javascript.
- Operating Systems: Proficient in using Linux, Windows and Mac Operating systems.
- Working knowledge of Computers on DesktopSQLite and Oracle Databases, Internet, MS-Office, Illustration, Dreamweaver etc.
- Languages: Fluent in speaking and writing English and Hindi

## **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