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TREDIR SEWPAUL

About Me

ID No.: 0004205370085

Sex: Male

Race: Indian

In December 2024, I completed my final year of studying toward a BSc degree in Computer Science. My education has not only focused on learning the fundamentals, but also on the practical applications of the information learned.

Education & Achievements

Bachelor of Science in Computer Science

University of the Western Cape

2018 – 2024

During my final year, I have:

- Majored in Computer Science
- Minored in Information Systems
- Elected in Physics
- Merit Award in Mathematics (MAM152) in 2021
- Merit Award in Astrophysics (PHY217) in 2023

Qualifications

Bachelor of Science in Computer Science

Experience

Samsung Future Innovation Lab

The University of the Western Cape / Belhar

March 2025 – Current

This is a course focused on building and developing my skills in the following areas:

Multiplatform Software Development:

- Gaining experience programming and learning about programming practices in C#.
- Utilizing .Net to create software and mobile applications (MAUI).

Digital Social Innovation:

- Understanding and being able to apply business related concepts in the workplace (Agile, Scrum, Project Management, etc.)
- Best practices when working as a team and frameworks and techniques for effective and efficient team dynamics.
- Effective communication through numerous presentations and professional speaking workshops as part of the course.

Lead Physics Tutor

The University of the Western Cape / Belhar

February 2020 - 2024

At UWC, I tutor Physics for a first-year course, PHY151. By tutoring this course, I came to realize that I enjoy helping others and being able to spread motivation through education. My duties in this role are as follows:

- Preparing for each laboratory session by reviewing the content and experimental activities planned for the week.
- Collaborate and/or assist other tutors with the understanding and planning of the activities.
- Supervise, guide, and assist 20 - 30 first-year students under my supervision through the understanding of the theory leading up to and after the practical. As well as the setup and methodology of the practical.

My Skills

Technical Skills

Programming Languages:

- Python: Proficient in developing scripts, data analysis, and automation.
- Java: Moderately proficient in building basic applications and understanding object-oriented programming principles.
- Matlab: Moderately proficient in modelling mathematical data, and analyzing data trends.

Microsoft Office Suite:

- Word: Proficient in creating, formatting, and editing professional documents.
- Excel: Skilled in data entry, basic formulas, and creating spreadsheets.
- PowerPoint: Experienced in designing engaging presentations and slide decks.

Additional Skills:

- Strong problem-solving and analytical skills.
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Co-curricular Activities

Standard Bank Hackathon June 2024

I participated in the UniHack, where I formed part of a team of 5. The task was to develop and prototype a solution to a community driven problem - The chosen sector was the transport industry.

SANReN Cyber Security Challenge (CSC) October 2024

I participated in a team of 4, we were tasked with various types of challenges namely, Capture the Flag, Penetration Testing, and Forensics. The cybersecurity challenge, involved solving complex security-related tasks such as:

- Identifying and exploiting vulnerabilities in simulated systems.
 - Analysing network traffic and logs to detect malicious activity.
 - Decrypting encoded messages and breaking cryptographic algorithms.
 - Reverse engineering malware to understand its functionality.
 - Collaborating with a team to defend against simulated cyberattacks.
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Volunteer Experience

Computer Science Volunteer April 2024 – Present

Regular trips to various high schools in Cape Town are planned by the IT Society and Women in Tech of UWC. Our main goal is to promote careers in the STEM fields, and I present my perspectives and experiences as a Computer Science and Information Systems student. We often incorporate educational discussions and exercises to engage and give learners a better understanding what a tertiary education entails.

- Mark and provide feedback to students for the weekly laboratory reports and quarterly laboratory exams.

Website Developer

Meals on Time / Kraaifontein

January 2022 – December 2024

At Meals on Time, I had overseen the development of the company's website which was an informative site showcasing the company's menu.

My duties in the above roles were:

- Created and maintained a catalogue displaying the company's host of products.
- I was tasked to create a website for the company by which their menu can reach a larger target audience. This task requires frequent, social media management, and frequent website functionality updates.

Mathematics & English Tutor

LM Tutoring / Kraaifontein

June 2023 – December 2024

At LM Tutoring I was a private tutor to various students from grades 6 – 11 in Mathematics and/or English. I placed utmost importance on this factor when imploring teaching methods to make an impact based on each student's area of difficulty.

My duties in this role include:

- Preplanning Lesson:
 - Setting up activities, reviewing content and bridging activities between new sections.
- Post Lesson Planning:
 - Evaluating the student's performance by comparison of previous lessons.
 - Developing an understanding of how I as the tutor can modify my teaching process to assist the student.

Website Administrator & Developer

Cuban Connection / Goodwood

November 2022 – December 2023

At Cuban Connection I have taken on various roles in various departments namely, **IT**, **Graphic Design**, **Sales**, and primarily in charge of the company's **e-commerce** website.

My duties in the above roles were:

- I have done various IT related tasks such as hardware & software support and maintenance.
- Created and maintained a catalogue displaying the company's host of products.
- I was tasked to create an e-commerce platform for the company by which their products can reach a larger consumer market out of the retail space. This task requires frequent online customer interaction, social media management, and frequent website functionality updates.

A Few of My Projects

1. Neural Networks:

This machine learning project focuses on implementing neural networks, covering core concepts like forward propagation, cost function calculation, and backpropagation. Using provided datasets and a detailed notebook, we applied these concepts to tasks involving optimization, multi-class classification, and evaluation. The assignment encouraged experimentation with parameters such as learning rates and polynomial degrees, offering hands-on experience with neural networks and reinforcing theoretical knowledge through practical application.

[view the project on GitHub](#)

QR Codes



My GitHub Repositories



My LinkedIn Profile

2. Fitness Center Management System:

The objective of this assignment was to design and implement a database using MySQL. This involved creating a relational database with tables and defining their relationships using SQL statements. Additionally, a client-side interface was developed using PHP, HTML, and JavaScript to allow users to perform CRUD operations (Create, Read, Update, Delete) and query the database. The project included creating an ERD, writing SQL statements for table creation and data insertion, and building a web interface to interact with the database dynamically.

The report provided detailed SQL code, PHP scripts, and design explanations, showcasing proficiency in database design and web development for database interaction.

[view the report](#)

[view the database demonstration video](#)