ZAID ISMAIL
SOFTWARE ENGINEER

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ABOUT ME

Organized, detail-oriented STEM graduate with experience in videogame programming and web development. Strong written and verbal communication skills. A quick learner and a great problem solver.

Skills: Python, C, C++, JavaScript, C#, Unity (Game Engine)

WORK EXPERIENCE

ThoroughTec Simulation
Junior Software Developer *Jan 2023 – Present*

- Developed training simulators for surface and underground drill-rigs using the Unity game engine.
- Handled both gameplay and UI programming, working on vehicle mechanics such as tramming, drilling and bolting, as well as the various GUIs associated with each vehicle.
- Cultivated a solid skill set in OOP and event-driven programming.

Multiple Projects
Open-Source Contributor on GitHub *Aug 2022 – Present*

- Refactored code in the Xenia Xbox 360 emulator project, written in C++.
- Contributed to the documentation of Scrapy, a Python web-scraping framework.
- Refactored code in DevilutionX, a source port of the action role-playing videogame Diablo and its expansion Diablo: Hellfire.
- Replaced icons on the frontend of Oppia, Google's open-source education platform.

Tau Space
Operations Engineer *Sep 2022 – Dec 2022*

- Wrote applications to directly interface with 5G network infrastructure.
- Developed test cases for network applications.
- Handled daily monitoring of servers, databases and business operations.
- Worked with databases to generate on-the-fly insights about business and systems operations.
- Automated several monitoring processes (such as querying databases, checking log files and generating CSV files) using Python.
- Liaised with clients in the South African telecoms industry to support day-to-day business and systems operations.

FORMAL EDUCATION

University of KwaZulu-Natal – Durban, South Africa *Jan 2017 – Dec 2021*
Bachelor of Science in Engineering (with Honours), Civil Engineering

- Completed eight Mathematics courses involving calculus, linear algebra, mathematical systems and statistics.
- Completed a dissertation on the flood attenuation function of artificial wetlands, which required data analysis and mathematical modelling.
- Planned the construction of a structural steel warehouse for the course's final design project.

CERTIFICATES

Stanford Online *Jun 2022*
Machine Learning
- Learned and applied several machine learning concepts including supervised learning, unsupervised learning, linear regression, logistic regression, gradient descent, neural networks and the SVM (support vector machine) algorithm.
- Implemented machine learning algorithms using Octave, a high-level programming language that is specialized for numerical computation and linear algebra.

Harvard Online *Mar 2021*
CS50's Web Programming with Python and JavaScript
- Gained proficiency in creating web applications using Django.
- Created interactive web pages using JavaScript.
- Learned how to use HTML5 and CSS.
- Built a stock trading web application, utilizing a REST API, that allows users to demo-trade stocks.
- Learned how to work with SQL databases.

Harvard Online *Jul 2020*
CS50's Introduction to Computer Science
- Learned how to program using C and Python by completing practical assignments.
- Learned the fundamentals of computer science.
- Leveraged low-level C programming techniques, including pointer manipulation and dynamic memory management.
- Developed a blog web application using the Flask web development framework.

ADDITIONAL

Interests: Videogames, technology, soccer, film, science fiction, history, geopolitics, economics

Languages: English

REFERENCES

Available upon request.