Mukhunyeledzi Muthuphei

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Education

University of Witwatersrand BSc Completion Expected 2023

Bachelor of Science in Computer Science *Johannesburg, Braam*

- **Relevant Coursework:** Data Structures and Algorithms, Algorithms & Programming, Mobile Computing, Database Fundamentals, Physics I, Software Design, Computer Networks, Parallel Computing, Machine Learning, Computational and Applied Mathematics, Analysis of Algorithms
- **Certificate of Merit (among top 2% in) :** Data Structures and Algorithms, Physics I, Database Fundamentals, Computer Networks, Computational and Applied Mathematics I, Computational and Applied Mathematics II, Analysis of Algorithms

Projects

Car Racing | *Java, Android Studio, XML*

- Led the development of a 2D top down view car racing mobile game using android studio.

Wits Snake AI | *Java*

- Developed an AI that plays the classic snake game.
- The AI was built on top of the BFS and A-star algorithms.
- Competing against more than 200 AIs, this AI took position number 2, based on which snake achieves, on average, the longest length before dying.

Ping Pong | *Godot, GDScript*

- Developed the classic ping pong desktop game using Godot, getting harder as time goes by.
- You could play a local PvP or play against the in-built AI with varying difficulty levels.

Charades | *React Native, JSX*

- Developed the classic ping pong desktop game using Godot, getting harder as time goes by.
- You could play a local PvP or play against the in-built AI with varying difficulty levels.

Sudoku AI | *C++*

- Developed an AI that solves sudoku 9x9, 16x16 and 25x25.
- The AI was based on the dancing links algorithm, making it fast enough to end in the top 10 against hundreds.

Cryptid Web App | *Javascript, Node.js, HTML & CSS*

- We (team) made and deployed a website that let's you digitally play the cryptid board game.

...and many more, including social media app, bus tracker etc

Recognition

School Prize for Achievement in Computational and Applied Mathematics I | *2022*

- This prize is awarded annually for outstanding achievement in Computational and Applied Mathematics I.

School Prize for Achievement in Computational and Applied Mathematics II | *2023*

- This prize is awarded annually for outstanding achievement in Computational and Applied Mathematics II.

PSYBERGATE Computer Science II Prize | *2023*

- This prize is awarded for outstanding performance in Computer Science II.

Technical Skills

Programming Languages: Python, Javascript, Java, C/C++, GDScript, SQL, JSX, HTML & CSS, XML, Mathematica, Latex
Technologies: Godot, Unreal Engine, React Native, Node.js, Android Studio, Arduino, GitHub, MySQL, MongoDB
Operating systems: Linux distros (ubuntu and debian based), MacOS, Windows

Soft Skills

Problem Solving, **Teamwork/ Collaboration**, **Communication**, **Creativity**, **Time management**

Interests

Game Development, **Cryptography**, **Electronics Engineering**, **Story Writing**