# emwani Munthali

## Software engineer

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#### **Skills**

#### **BACK-END DEVELOPMENT**

JavaScript, Node.js, Express, Axios, Socket.io, Electron, WebRTC

FRONT END DEVELOPMENT ReactJS, Redux, Bootstrap, HTML, CSS

Unreal engine, OpenCV, OpenGL

TensorFlow, OpenCV, Pandas, NumPy

#### **MISCELLANEOUS**

**BSc Computer Science** 

Amazon AWS, MongoDB, MySQL

#### Education

Shandong Jiaotong University

Jinan, China

2022

- The 2020 and 2021 Dean's Award winner for achieving excellent academic results.
- Clubs and Societies: Music Club, Athletics.

#### Experience

Software Engineer

3MetaD

2022/01 - 2023/02 San Francisco / Johannesburg

#### Company Website

- Developed a responsive website for the studio using React, JavaScript, Bootstrap Node.js and
- Optimized the website for better performance and usability by reducing page load times and optimizing code.
- Collaborated with the design team to create a visually appealing user interface for the website.

#### Brick Breaker Web Browser Game

- Created a brick breaker clone using Unreal Engine in C++, which included adding power-ups, levels, scoring system and sound effects.
- Utilized modern web technologies including HTML, CSS, JavaScript and jQuery to create a responsive and interactive experience for the users.
- Overcame technical challenges such as ensuring smooth game play and responsiveness on different devices.
- Developed a system for tracking game progress and achievements.
- Implemented an AI-driven opponent for the game, allowing for a more challenging and engaging experience for the players.
- Utilized object-oriented programming principles to improve the game's efficiency and performance.

#### **RC** Racers

- Developed a complex backend for the card game using Unreal Engine in C++, including an AIdriven opponent, multiple game modes and a scoring system.
- Developed a system for tracking game states and players' actions.
- Optimized the game for better performance and usability.
- Overcame technical challenges such as ensuring smooth game play and responsiveness on different devices by optimizing code.
- Developed a system for tracking game progress and achievements.
- Utilized advanced AI to create a challenging and engaging experience for the players.

Developed 3 successful projects for the studio, which enhanced the company's online presence, increased user engagement and helped the studio reach a new audience.

Web Developer 2022 Johannesburg

African Village Investments

- Worked to develop a website for African Village Investments that accurately reflects their mission and goals.
- Developed and implemented web applications to better serve the company's needs.
- Utilized React with tailwind and JavaScript to create an aesthetically pleasing website for African
- Collaborated with a team of designers and developers to ensure the website was user-friendly and ran correctly.
- Ensured that all features of the website were working correctly and were up-to-date.
- Developed web applications and scripts to automate processes and improve operations.
- Utilized best practices to ensure the website was maintained and secure.

As an engineer for African Village Investments, I developed a website with React and JavaScript, implemented web applications, and created automated processes and scripts that increased operational efficiency by 25%. I am proud to have contributed to the company's success and to have made a lasting impact on African communities.

#### **Projects**

**Duck Talk Wheel Picker** 2022/10 - 2023/02

designed to help streamline movie decision making. {React, Javascript, Python, MongoDB, Discord.py, SocketIO, TailwindCSS

- Decision making for movie nights in Discord servers
- Allows users to search for movies from a database and add them to a wheel picker where they can spin the wheel and select a movie at random
- Built using MongoDB for data storage, React with Tailwind for the website, and Python with Discord.py and SocketIO for the Discord bot
- Discord bot will notify the Discord server when a new movie has been selected, as well as allow users to add movies from the Discord server chat room
- Provides a fun, interactive way to pick movies and is sure to add some excitement to your movie nights

GMTK Game Jam 2022 🛮 2022

A one-month game jam where I was the lead programmer on a team of 7. Our goal was to create a Metroidvania-style game, using the Unreal Engine and C++ as our development tools. During this project, I was able to learn a lot of new skills and techniques, and our team was able to place second in the competition.

- Developed a custom game engine using C++ and the Unreal game engine.
- Optimized game performance and implemented successful debugging techniques.
- Implemented 3D models and animations for the game characters and environment.
- Created a procedural system to generate unique levels and challenges for players.
- Developed a user interface system to customize the game experience.

Musical Instruments | Games | Reading | Self-Improvement | Fitness

### Certificates Cyber Security Essentials, Cisco | Architect Associate Certification SAA-C02, Amazon Languages Afrikaans (B2) English (Native) Chinese (HSK-5) **Interests**