PRINCE **MASHAVA**

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PROFILE

B.Sc. Electrical & Computer Engineering Honours student at the University of Cape Town with a strong passion for software engineering. Proficient in Python, Java, SQL, C, and other programming languages, with experience in developing web solutions and participating in hackathons focused on innovative software applications. Demonstrated ability to quickly learn and implement new technologies to create effective and efficient solutions.

EXPERIENCE

AUG 2023 – PRESENT
WEB DEVELOPER, MIKABYTE TECHNOLOGIES, PART-TIME

I create websites. My primary focus is on visual aesthetics, user experience, and the overall layout of websites. I use WordPress which is a content management system that allows users to create and manage websites easily due to its user-friendly interface, flexibility, and extensive plugin ecosystem.
I receive wireframes from the designers which outline the structure and layout of the website. Then I use graphic design software to create the website ensuring it has visually appealing elements such as color schemes, typography, images, and other visual content. It's also my responsibility to ensure the site is responsive, adapting to various screen sizes and devices for an optimal user experience.

NOV 2022 – JAN 2023
VACATION WORK, MATRIX WAREHOUSE COMPUTERS, RUSTENBURG

Gained practical experience of dealing with computers and various electronics. I learnt how to wire RJ45 LAN cables; install various components on a computer motherboard such as RAM, CPU, CPU fan & PSU then wire them to each other their respective ports on the motherboard and ultimately assemble a desktop from scratch. I also learnt how to change laptop screens, clone hard drives for upgrades e.g., from an HDD to SSD; load software such as Windows OS; and the layout of a motherboard.

PROJECTS

OCT 2024
INTERLEDGER OPEN PAYMENTS HACKATHON FINALIST

Reached the finals in this intensive overnight competition, by developing Bubo, a financial tool that leverages Interledger Open Payments API to offer real-world budget management solutions. Demonstrated the viability and effectiveness of our concept by building a working prototype in a high-pressure environment. The languages used for the backend were Typescript as well as JavaScript. We implemented vendor-restricted digital wallets and peer-to-peer (P2P) lending capabilities and integrated an AI-driven Bubo assistant to provide users with personalized budgeting insights and enforce spending discipline. We were able to showcase a functional proof of concept using the test wallets provided and thus validating Bubo's potential to improve

financial stability and responsible spending for users, proving the model's scalability and real-world feasibility.

APR 2024 – OCT 2024
UCT'S THE PITCH FINALIST
Pioneered Budget Lock, a budgeting app designed to help South African students and young adults achieve financial stability. Budget Lock provides purpose-specific digital wallets and AI-driven financial insights, helping users control spending and build better budgeting habits. It tackles issues of overspending, lack of budgeting discipline, and poor financial visibility among young adults. The front end of the app was developed using flutter. This was a concept we designed which restricts spending on specific categories (e.g., groceries, rent), it is supported by Bubo, an AI assistant offering tailored financial advice using the Groq API. We reached the finals in a competition which took place over the span of months, highlighting Budget Lock's innovation in promoting financial literacy and control among its target demographics.

NOV 2023
CELO DEFI AND TRADING HACKATHON
Participated in the Celo Foundation Hackathon hosted Celo, Mento Labs and Carbonhood. My team secured 2nd place with a project focused on Opera Minipay, leveraging React, JavaScript, and TypeScript. Developed an innovative application featuring a Budget Lock to prevent overspending, a Debt Reminder for automated payment notifications, and a "Please Top Up Me" feature to request e-wallet top-ups via SMS. We demonstrated skills in rapid learning and integration of new technologies, contributing to the Celo ecosystem's growth by building real-world use cases. The project was deployed on Vercel and integrated with the Celo Testnet and Mainnet.

LEADERSHIP

NOV 2024 - PRESENT
HEAD MENTOR, LEO MARQUARD HALL, UNIVERSITY OF CAPE TOWN

JAN 2024 – NOV 2025
VICE PRESIDENT OF ENGINEERS FOR THE FUTURE, UNIVERSITY OF CAPE TOWN

JAN 2024 – NOV 2025
MENTOR, LEO MARQUARD HALL, UNIVERSITY OF CAPE TOWN

NOV 2020 – NOV 2021
HEAD BOY, FIELDS COLLEGE, RUSTENBURG

EDUCATION

2022 - 2025
B.SC. IN ELECTRICAL & COMPUTER ENGINEERING, UNIVERSITY OF CAPE TOWN
I am an Honours student at UCT. This degree combines a central study in electrical engineering with computing. I have gained a foundation of understanding in physical science, advanced

engineering mathematics, microcomputer technology, systematic engineering design, printed circuit boards, computed aided design and programming.

2017 - 2021
GRADE 12 NSC CERTIFICATE, FIELDS COLLEGE, RUSTENBURG
Earned 2nd place in the Top 10 At Fields College. Achieved distinctions for English HL, Afrikaans FAL, Mathematics, Life Sciences, Physical Sciences & Information Technology

TECHNICAL SKILLS

- Python programming
- Java programming
- SQL
- C programming
- MATLAB

- Printed Circuit Board Design (kiCAD)
- Computer Aided Design (Solidworks)
- Assembly programming
- Git version control
- Ubuntu

SOFT SKILLS

- Communication
- Critical Thinking
- Leadership
- Adaptability

- Teamwork
- Time Management
- Active Listening
- Adaptability