Fhumulani Moses Makungo

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Profile

I am a final-year Diploma in ICT Applications Development student at Cape Peninsula University of Technology (CPUT), with hands-on experience in software development, front-end engineering, and interactive systems. Currently, I work as a Software Developer Intern at Plum Systems, designing and building responsive web and mobile interfaces using React, React Native, and Expo. My work includes state management, REST API integration, Firebase cloud services, and delivering scalable, user-centered solutions.

Previously, I contributed to the NRF South African Astronomical Observatory as a Science Engagement Intern and Assistant, where I combined technical development with project coordination and outreach. I worked on front-end web projects (PHP, HTML, CSS, JavaScript), managed digital platform content, and provided technical support for interactive systems including VR, holographic displays, touchscreens, and solar telescope interfaces. I also assisted in planning and executing science engagement events, strengthening my organizational, collaboration, and problem-solving skills.

Earlier academic and voluntary experiences provided foundational skills in lab work, content creation, and team collaboration, further supporting my ability to operate across technical and operational contexts.

I am eager to grow my career in the technology space, applying my skills in software development, front-end engineering, interactive systems, and digital solutions to drive innovation, deliver impactful user-centered experiences, and contribute to diverse tech projects.

Professional Experience

2025/01 – present Cape Town, South Africa

Software Developer (Intern)

Plum Systems

As part of my Work Integrated Learning (WIL) programme, I serve as a Front-End Developer focusing primarily on React and React Native development. My work involves building, improving, and maintaining user interface components for web and mobile applications, ensuring a consistent and user-friendly experience. I frequently collaborate with backend developers, designers, and QA engineers, gaining exposure to the full software development lifecycle.

Key Responsibilities and Achievements:

- Built and enhanced responsive UI features using React, React Native, and Expo, contributing to several live client projects.
- Applied state management principles (using Redux and Context API) to manage complex component states and data flow.
- Gained a better understanding of Integrating REST APIs to connect front-end components with backend services and dynamic data sources.
- Collaborated on projects that utilized Firebase for authentication, real-time data, and cloud functions, gaining practical familiarity with backend integrations.
- Tested and debugged applications using Expo Dev Tools, and Chrome Developer Tools, ensuring smooth functionality and performance.
- Maintained clean and consistent code with ESLint, Prettier, and clear commit practices in GitLab repositories.
- Contributed to documentation by in code commenting, writing setup and testing notes, and documenting reusable UI components for team reference.

- Participated in stand-ups, providing progress updates and collaborating on issue resolution.
- Continued self-learning on tools such as Firebase Cloud Functions, and CI/CD pipelines, applying this knowledge to improve debugging and build efficiency.

Tools & Technologies:

React, React Native, Expo, Redux, JavaScript (ES6+), Firebase (Auth, Firestore, Functions), REST APIs, ESLint, Prettier, Git, GitLab, Webpack, Babel, npm/Yarn, VS Code, Chrome DevTools, Android Studio, Xcode.

2024/08 – 2025/01 Cape Town, South Africa

Science Engagement Assistant (Contract)

NRF South African Astronomical Observatory

Focus: Technical support & project implementation, with continued administrative responsibilities

- Office Administration & Oversight: Assisted in daily administrative tasks and oversaw intern activities to ensure smooth operations.
- Communications: Managed internal and external communications, responding promptly and professionally to inquiries via email and phone.
- Event & Project Planning: Assisted in planning, organizing, and coordinating science engagement events and projects (AstroQuiz and Olympiads), ensuring timelines and objectives were met.
- Media & Content Creation: Supported development and management of media content for internal and external platforms.
- Visitor Technology Support: Maintained and troubleshot advanced interactive systems, including VR experiences, LED projection setups, touchscreen displays, holographic units, and a solar telescope interface.
- Front-End Development: Contributed internal web projects (PHP, HTML, CSS, JavaScript) with UI design, layout refinement, and basic functionality testing.
- App & Content Coordination: Assisted in updating and managing app and kiosk content, collaborating with developers to ensure accurate and functional interfaces.
- Technical Collaboration: Worked closely with IT to resolve software/hardware issues, improving system reliability and user experience.
- Event & Outreach Support: Ensured all technical systems were operational during public engagement events.
- Documentation & Reporting: Logged recurring technical issues, system resets, and workflow improvements for internal tracking.

Tools & Technologies: PHP, HTML, CSS, JavaScript, CMS platforms, Browser DevTools, Microsoft 365, Trello, Descript, LeapMotion, Notion, VR & interactive systems.

2023/06 – 2024/07 Cape Town, South Africa

Science Engagement Intern

NRF South African Astronomical Observatory

- Office Admin: Perform daily administrative tasks to ensure smooth operations.
- Communications: Handle internal and external communications, Responding promptly and professionally to inquiries through our SAAO contact platforms (email and Telephone).
- Event planning and coordination: Assist in planning, organizing, and coordinating science engagement and outreach events, ensuring that all logistics and details are managed efficiently while meeting timelines and objectives.
- Project planning, coordination, management: Assist in the planning and coordinating various projects (AstroQuiz and Olympiads), ensuring timelines and objectives are met.
- Media & Content creation: Assist in developing and managing media content for internal and external platforms (Mobile app, Website, Podcast, and Youtube), ensuring consistent and effective messaging.

Education

2023/01 – present	Dip. ICT in Applications Development Cape Peninsula University of Technology
2020/01 – 2022	MSc Nanaoscience University of the Western Cape
2018/01 - 2018/12	BSc Honors Microbiology University of Venda
2013/01 - 2017/12	Bsc Biochemistry & Microbiology University of Venda
2008/01 - 2012/12	Matric Mbilwi Secondary School

Voluntary Experience

2024/08	IAU GA 2024
Cape Town, South	Outreach & engagement volunteer
Africa	During the 2024 IAU GA I volunteered as an outreach and engagement volunteer for 2 weeks were I assisted in Outreach & Engagement during the course of the general assembly, which was the first time happening in the African continent.
2018/02 - 2018/10	University of Venda (Microbiology department)
Thohoyandou, South	Lab Assistant
Africa	Voluntary Lab Assistant: Clean & maintain utensils, managed inventory, captured data, assisted with practical sessions, and supported tests and activities.
2017/02 - 2017/10	University of Venda (Biochemistry Department)
Thohoyandou, South	Lab Assistant
Africa	Voluntary Lab Assistant: Cleaning and maintaining lab utensils, Reagents and stock inventory, and Data capturing.

Technical & Coding

- Front-End Development: React, React Native, Vue.js, HTML5, CSS3, JavaScript (ES6+)
- Back-End Development: PHP (Laravel), Java (Spring Boot), SQL, REST API development, Firebase (Auth, Firestore, Cloud Functions), serverside scripting
- Programming Foundations: Java, Python
- UI/UX Design & Prototyping: Figma, responsive design, accessibility-focused interfaces
- Development & Collaboration Tools: Git/GitLab, VS Code, Chrome DevTools, npm/Yarn

Core competency

- Time Management, Adaptability, and Self-Motivation
- Strong Interpersonal Skills and Attention to Detail
- Ability to Learn Quickly and Work Autonomously
- Effective verbal, written, digital, and telephonic communication
- Report Writing and Technical Documentation

Administrative & Project

- Data Analysis & Data Capturing
- Project Planning, Event Coordination, and Procurement
- Organizational and Multitasking Abilities
- Documentation & Reporting
- Microsoft Office: Word, Excel, PowerPoint, Outlook

Certificates

- SQL essentials & training (LinkedIn Learning)
- Programming Foundations & Software Development (LinkedIn Learning)
- Project Management Foundations: Quality (LinkedIn Learning)
- UX/UI Design (LinkedIn Learning)
- GitHub Essentials & Training (LinkedIn Learning)

Awards

2025	Generative AI for Learning and Development course for software engineers
	WeThinkCode_
	Awarded for completing and showing understanding of foundational skills in working with generative AI, from crafting effective prompts to integrating AI tools into my
	software development workflow.
2024	AfriHack Connect Certificate of Achievement
	Empiras Global Academy
	Certificate for runner up team in AfriHack Connect Hackathon
2024	GEW 2024 Hackathon Certificate
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	Certificate for participation in the GEW 2024 hackathon

Languages

• TshiVenda • English • XiTsonga

SepediisiXhosa

References

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Daniel Cunnama, Science Engagement Astronomer, NRF SAAO cunnama@gmail.com, +27 82 531 8171