

TAKAWIRA JOSEPH MUMANGA, PHD

Director of Innovation and Research • DevOps Professional • Data Scientist

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PROFESSIONAL PROFILE

Director of Innovation and Research with a PhD-level research background, specializing in high-scale Super Intelligence infrastructure and DevOps automation. Expert in Oracle Cloud (OCI) and "Vibe Coding" methodologies to bridge the gap between complex mathematical models and production-ready enterprise software.

LANGUAGES

English	Native
Spanish	Fluent

OCI CERTIFIED SUITE

DevOps Professional

Oct 2025 • OCP Certified

Generative AI Professional

Sep 2025 • OCP Certified

AI Vector Search Professional

Sep 2025 • OCP Certified

Data Science Professional

Sep 2025 • OCP Certified

Analytics Cloud Professional

Oct 2025 • OCP Certified

Multicloud Architect Professional

Oct 2025 • OCP Certified

AI Foundations Associate

Aug 2025 • OCFA Certified

Foundations Associate

Mar 2025 • OCFA Certified

Fusion AI Agent Studio

(Foundations Associate)

Oct 2025 • Associate Certified

PROFESSIONAL EXPERIENCE

Director of Innovation and Research (CID Project)

2023 — Present

FORTE INNOVATION CONSULTING • CENTER OF INNOVATION & DEVELOPMENT

- Leading strategy, design, and engineering for high-impact Super Intelligence products, Big Data software, and enterprise MVPs.
- Architecting end-to-end Generative Super Intelligence solutions and Vector Search architectures using Oracle Cloud Infrastructure.
- Implementing automated DevOps pipelines to accelerate the transition of laboratory prototypes into scalable enterprise-grade software.
- Directing "Vibe Coding" initiatives to rapidly build and validate custom Super Intelligence-integrated web applications for corporate clients.

Solutions Architect & Blockchain Specialist

2022 — 2023

METAPHORCE / FORTE INNOVATION CONSULTING

- Engineered and deployed Smart Contracts in Solidity on the Ethereum network for secure certificate issuance and digital asset management.
- Designed blockchain-based traceability systems to ensure data integrity and transparency across the Metaphorce platform.
- Developed predictive models and decentralized architectures using Python and Ethereum-compatible frameworks.

Technical Lead — Systems Engineering

Jul 2022 — Jan 2024

ZKW GROUP (LG ELECTRONICS — LIGHTING SYSTEMS)

- Orchestrated system-level technical architecture for high-performance automotive hardware-software integration.
- Managed cross-functional engineering teams to ensure technical validation and manufacturing compliance for Tier-1 automotive projects.
- Optimized digital simulation workflows using Code V and Zemax within a software-defined product development cycle.

Cloud Solutions Engineer (CRECE Project)

2021 — 2022

MAS VIDA

- Designed and engineered complex Data Pipelines in JavaScript deployed on Google Cloud Platform (GCP).
- Automated large-scale data capture and analysis processes, improving institutional efficiency and data reliability.
- Managed full-cycle cloud infrastructure deployment and system integration for high-volume analysis workflows.

AI Professional Certificate

Issued Feb 2026

- AI for App Building (Vibe Coding Expert)
- AI for Research and Insights
- AI for Data Analysis
- AI for Brainstorming and Planning
- AI for Writing and Communicating
- AI for Content Creation
- AI Fundamentals (ACT Framework)

🛡️ CORPORATE CREDENTIALS

IBM Business Partner Integrity Training (Nov 2025)

NetApp StorageGRID Fundamentals (Sep 2026)

NetApp Accredited AI Solutions Associate (NAAISA) (Sep 2026)

NetApp Winning with AI: RAG and Inferencing (Sep 2026)

NetApp Winning with AI: Model Training, Fine-Tuning, and High-Performance Model Training (Sep 2026)

NetApp Winning with AI: Data Lake Modernization (Aug 2026)

🔧 SOFTWARE TOOLBOX

AWS Azure DevOps

DevSecOps CI/CD Pipelines

Docker / Kubernetes Git

ML / MLOps Deep Learning

LLMs / VLM Computer Vision

Vector Search

Generative Super Intelligence Python

Java C++ MATLAB Solidity

Blockchain Vibe Coding

Automation Data Management

Data Engineering Data Analysis

Power Query KNIME Analytics

Design / Figma Vue.js LabVIEW

SolidWorks Claude / OpenAI

Cursor / Antigravity IDE

Codex / Claude Code

Gemini Deep Research

ACT Framework Gemini Canvas

OCI DevOps Analytics Cloud

PhD in Optics Science (Systems Focus)

Centro de Investigaciones en Óptica (CIO), Mexico

Dissertation: "Development of New Materials for Photocatalytic Hydrogen Generation" — specialized in semiconductor physics and systems modeling.

BEng Electrical & Electronic Engineering

University of Johannesburg, South Africa

📖 SELECTED SYSTEMS PUBLICATIONS

“Recent progress in organic waste recycling materials for solar cell applications”

Peer-Reviewed Journal • T.J. Mumanga et al. • Environmental Science and Pollution Research (2023)

“Smart Emergency Response Interface for Fire Detection”

Conference Proceedings • Lead Presenter • IEEE AFRICON (2015) • Software/Interface Design Focus