

ENOCK ONKARABILE BUYS

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Disake Village, Rapheto section, House 50250, Northwest, 0370

Date of Birth: 26 January 2001 | South African

[LinkedIn](#) | [GitHub](#) | [Portfolio](#) | [ALX Progress](#) | [Facebook](#)

EDUCATION

BSc Honours in Computer Science (Artificial Intelligence)

Jan 2025–Present

University of Johannesburg, Gauteng

Relevant Coursework: Generative AI, Reinforcement Learning, Advanced Machine Learning, Linux System Administration

BSc Mathematical Sciences

Jan 2020–Sep 2024

University of Limpopo, Limpopo

Majors: Computer Science, Statistics

ALX Data Science Bootcamp

May 2025–Present

- *Completed:* Professional Foundations (May 2025, 12 weeks)
- *Current:* Data Analytics (Aug 2025–Nov 2025, 14 weeks)
- *Upcoming:* Python Programming, Machine Learning, AWS Cloud
- *Progress:* [ALX Profile](#)

Grade 12 Matric (Bachelor's Pass)

2018

Gaopotlake Secondary School

Focus: STEM subjects (Mathematics, Physical Sciences)

ACADEMIC PROJECTS

Fraud Detection: Generative AI Research

2025–Present

Honours Thesis Project

- Developing Conditional GAN model to synthesize evolving fraudulent transaction patterns
- Addressing extreme class imbalance (0.5% fraud ratio) in financial datasets
- Implementing quantitative evaluation using FID and KID metrics
- Testing augmentation ratios (5-30%) to optimize fraud detection performance
- *Stack:* Python, TensorFlow, Scikit-learn, Pandas, NumPy
- *Code:* [GitHub Repository](#)

Reinforcement Learning Game Agent

2025

Artificial Intelligence Course Project

- Created Deep Q-Network (DQN) agent for Dots & Boxes game using self-play training
- Designed environment properties: Stochastic, Sequential, Discrete (16x16 grid)
- Implemented reward system with experience replay for sparse environments
- *Stack:* Python, PyTorch, Reinforcement Learning algorithms
- *Code:* [GitHub Repository](#)
- *Demo:* [YouTube Video](#)

Secure Linux Backup System

2025

Data Communications & Linux Administration Project

- Built automated encrypted backup solution for small-medium businesses

- Implemented BorgBackup with client-server architecture on Ubuntu 22.04
- Integrated cloud sync (Rclone) and monitoring (Grafana/Prometheus)
- Developed web interface (Vorta) for backup management and restoration
- *Stack:* Ubuntu, Docker, BorgBackup, Nginx, Let's Encrypt

Hybrid VAE-GAN for Face Generation

Research Proposal

2025

- Investigated hybrid architectures for low-resolution (32x32) face generation
- Compared fusion strategies (early/late/progressive) for quality-diversity tradeoff
- Evaluated using CelebA dataset with resource-constrained benchmarks

Dating Platform with Matching Algorithms

Undergraduate Capstone Project

2024

- Led team in developing full-stack dating application
- Implemented JWT-based authentication and preference-based matching algorithm
- Designed Firebase database schema for user profiles and interactions
- *Stack:* React, Node.js, Express, Firebase, JavaScript
- *Live Demo:* mingle-sa.vercel.app
- *Code:* [GitHub Repository](#)

WORK EXPERIENCE

IT Tutor

Jan 2022–Dec 2024

Polokwane Tutors Pty Ltd, Limpopo

- Taught Java OOP programming and Computer Applications Technology
- Mentored students on final programming projects (PAT)
- Developed personalized learning plans improving pass rates

TECHNICAL SKILLS

Programming Languages:	Python, Java, JavaScript, SQL
AI/ML Frameworks:	TensorFlow, PyTorch, Scikit-learn, Keras
Data Science:	Pandas, NumPy, Matplotlib, Statistical Analysis
Databases:	Firebase, SQLite, PostgreSQL
DevOps/Cloud:	Docker, Linux (Ubuntu), AWS Fundamentals, Git
Web Development:	React, Node.js, Express, HTML/CSS

CERTIFICATIONS

- Microsoft 365 Certified: Fundamentals 2025
- Microsoft Security, Compliance & Identity Fundamentals 2024
- Administering Information Protection in Microsoft 365 2024
- Cisco Python Essentials 1 2024

REFERENCES

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