

Xander Coetzee

BSC IT & BSC HONS COMPUTER SCIENCE GRADUATE

ABOUT

I am a driven problem-solver with a passion for designing innovative solutions to complex challenges. As a dedicated lifelong learner, I embrace new challenges and opportunities for growth, constantly seeking to expand my skillset and expertise.

EDUCATION

Hoërskool Linden (2017 –2022)

National Senior Certificate

Afrikaans, English, Mathematics, Information Technology, Physical Science, Geography

North-West University (2022 - 2024)

BSc Information Technology

- Computer management and programming
- Designing, development and delivery of computerised systems
- Contribution to management of information and information sources
- Development of IT-related solutions

University of Pretoria (2025)

BSc Honours Computer Science

- Gained advanced technical expertise in Computer Science
- Led and completed a high-standard research project in Digital Forensics
- Applied strong programming and report writing skills across all modules
- Trained in and utilised formal research methodologies.

EXPERIENCE

Assistant lecturer at NWU 2023 – 2024

As an assistant for a programming module, my duties included providing direct coding support to students in labs, grading tests and programming assignments, and managing marks under strict deadlines. I also delivered targeted tutoring on debugging and core concepts. The position required meticulous technical detail and a firm commitment to enhancing student outcomes.

ADDITIONAL ACTIVITIES

- Choral singing in high school and with the NWU PUK Choir has been a joyful way to express my creativity and connect with others through music.
- As a past team leader and manager for an esports team, I enjoyed the camaraderie and the excitement of competitive play, which also fostered a sense of community and collaboration.
- Singing in the university acapella serenade was a fun and unique experience that allowed me to share my passion with a wider audience.
- Playing video games is a favorite pastime that sharpens my problem-solving skills and provides a relaxing escape.



Email

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PROJECTS

AI-Driven Phishing & Forensic Readiness

Architected an automated threat detection and evidence preservation framework, integrating secure forensic protocols to ensure organizational cyber-resilience.

Digital Forensics & Information Security

Executed full-lifecycle penetration testing and forensic analysis across Windows/Linux environments, identifying attack vectors and insider threats through advanced disk-level investigation.

Optimised Data Mining Algorithms

Engineered a scalable, memory optimised weighted Apriori algorithm using transaction ID intersections

Computer Vision & Deep Learning

Developed metaheuristic pipelines for automated image quality enhancement and deployed state-of-the-art YOLO models for real-time object detection.

Cross-Lingual NLP & Emotion AI

Pioneered parameter-efficient transfer learning for multilabel emotion analysis, advancing deep learning capabilities for under-resourced African languages.

Skills

- Cyber Security
- Digital Forensics
- Natural Language Processing (NLP)
- Machine Learning & Deep Learning
- Python Programming
- Data Mining
- Research & Academic Writing
- Web Scraping
- Data Visualisation