TSHOLOFELO MOKHELELI
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PROFILE

I currently work as an Assistant Lecturer (Junior Lecturer) at the Department of Applied Information Systems (AIS) at the University of Johannesburg (UJ). With three years of tutoring experience, I have proudly served as a strategic tutor for AIS. I am a DPhil candidate; my academic journey includes attaining an undergraduate diploma and an advanced diploma in Business Information Technology, completing a BCom Hons in Information Systems, and achieving an MCom in IT Management with distinction, where I specialised in the application of Artificial Intelligence and Machine Learning.

During my MCom research, I conducted an in-depth comparative study utilising Machine Learning to predict mental health disorders. My overarching research interest lies in applied data science, with a strong emphasis on harnessing the potential of Artificial Intelligence for social good, often referred to as AI4Good.

ACADEMIC CREDENTIALS

2025-Present	Centre of Applied Data Science, University of Johannesburg, (South Africa) DPhil in Applied Data Science PhD by publication
2023-2024	AIS, University of Johannesburg, (South Africa) MCom in Information Technology Management (*Passed with distinction*) Dissertation title: A Comparison of machine learning techniques in predicting mental health disorders.
2022-2023	AIS, University of Johannesburg, (South Africa) BCom Hons in Information Systems
2021-2022	AIS, University of Johannesburg, (South Africa) Advanced Diploma in Business Information Technology
2018-2020	AIS, University of Johannesburg, (South Africa) National Diploma in Business Information Technology

WORK EXPERIENCE

Institution:	Department of Applied Information Systems, UJ, South Africa
Tenure:	2024-Present
Position:	Assistant Lecturer
Responsibilities:	Teaching and Research

Institution:	College of Business and Economics, Vice Dean Office, UJ, South Africa
Tenure:	Jan 2024 - March 2024
Position:	Administrative Clerk
Responsibilities:	Developed the backend for a key institutional system.

Institution:	Damelin, Randburg, South Africa
Tenure:	Sept 2023- Dec 2023
Position:	Lecturer (Part-time)
Responsibilities:	Teaching

Institution:	Department of Applied Information Systems, UJ, South Africa
Tenure:	2022-2023
Position:	Student Assistant
Responsibilities:	Support students with academic and administrative tasks, as well as tutor

management and marking.

Institution:	Department of Applied Information Systems, UJ, South Africa
Tenure:	2021- 2023
Position:	Strategic Tutor
Responsibilities:	Tutored 1st to 3rd-year students in all programming modules.

PUBLICATIONS

Journals

[1] **Mokheleli, T.** & Museba, T. (2023). Machine Learning Approach for Credit Score Predictions. *Journal of Information Systems and Informatics*.

[2] **Mokheleli, T**., Bokaba, T., Ntshingila, N., Ndayizigamiye, P. & Efosa, I. (2024). Machine Learning in Mental Health: Evaluating Feature Selection Techniques for Enhanced Diagnostics. *Information Systems Frontiers*. (***Under review)***.

[3] **Mokheleli, T**. (2025) Age-stratified Mental Health Risk Prediction using SHAP: An Explainable Artificial Intelligence Framework. *Inteligencia Artificial* ***(Submitted).***

Conference Proceedings

[1] **Mokheleli, T.**, Bokaba, T. & Museba, T. (2023). An In-Depth Comparative Analysis of Machine Learning Techniques for Addressing Class Imbalance in Mental Health Prediction. *Australasian Conference on Information Systems (ACIS) 2023 Proceedings*.

[2] Mbuya, E., **Mokheleli, T.**, Bokaba, T. & Ndayizigamiye, P. (2023). A Multiclass Approach to Predicting Diabetes Using Machine Learning. *Australasian Conference on Information Systems (ACIS) 2023 Proceedings*.

[3] **Mokheleli, T.**, Bokaba, T., Museba, T & Ntshingila, N. (2023). A Machine Learning Approach to Mental Disorder Prediction: Handling the Missing Data Challenge. *EAI AFRICATEK 2023*.

[4] Mbuya, E., **Mokheleli, T.**, Bokaba, T. & Ndayizigamiye, P. (2024). The Application of Artificial Intelligence in Diabetes Prediction: A Bibliometric Analysis. *18th IFIP Working Group 9.4 Conference*.

[5] Mbuya, E., **Mokheleli, T.**, Bokaba, T. & Ndayizigamiye, P. (2025). Enhancing Diabetes Prediction Through Deep Learning: Addressing Class Imbalance in Multiple Classification. *America's Conference of Information Systems (AMCIS2025)*. *(submitted)*

[6] **Mokheleli, T.**, Bokaba, T. & Ndayizigamiye, P. (2025). A Bibliometric Review of the Application of Artificial Intelligence in Emergency Care Units: Trends and Research Agenda. *AFRICATEK 2025*. *(Submitted)*

Papers Presented at Conference

[1] **Mokheleli, T.**, Bokaba, T., Museba, T., Ntshingila, N., Ndayizigamiye, P. & Efosa, I. (2023). Optimising Mental Disorder Prediction with Machine Learning Enhancing Machine Learning Models Accuracy through Feature Selection. *Annual Conference of the International Academy of Business, Howard University School of Business, USA*.

ACADEMIC ADMINISTRATIVE EXPERIENCE

Sept 2023 - Dec 2023   Programme Coordinator and Lecturer (Part-time): Damelin Randburg, South Africa.

TRAINING RECORD

Other Trainings

- Mainframe with z/OS Commands and Panels, IBM, 2020
- Master the Mainframe, IBM, 2020
- Enterprise Design Thinking Practitioner, IBM, 2020
- Python Basic, Coursera, 2021
- IBM Z Xplore – Concepts, IBM, 2023
- Tutor Training Level 3, University of Johannesburg, 2023

UNIVERSITY TUTORING EXPERIENCE

Postgraduate Course Tutored (BCom Hons)

Predictive Analytics (232ISM8X09)
Learning From Data (231ISM8X04)

Undergraduate Course Tutored

Development Software 1A (Python Programming Language)
Development Software 1B (C# Programming Language)
Development Software 3A (C# Programming Language)

UNIVERSITY TEACHING EXPERIENCE

Undergraduate Course Taught

Development Software 1A (Python Programming Language)
Business Analysis 3B
System Software 1A

Student Supervision

Honours Degree

- [Leevashan Pillay], Analysing Cybersecurity Honeypot Attacks Using Real Cyber Attack Data, UJ, 2024, (50% Supervision with Dr Tebogo Bokaba) [*Complete*]
- [Esihle Mlaka], The impact of Virtual Reality in education (STEM), UJ, 2024, (50% Supervision with Dr Tebogo Bokaba) [*Complete*]
- [Xoliswa Masuka], The Impact of AI and Machine Learning on Retail Fraud Detection, UJ, 2024 (50% supervision with Dr Tebogo Bokaba) [*Complete*]

COLLEGE TEACHING EXPERIENCE

Damelin (Randburg)

Networks 1B
Programming 2B (Java Programming Language)
Programming 3B (C# Programming Language)
Web Development 2B
Linux + Preparation
Concept of Computer Architecture

RESEARCH INTEREST

- Artificial Intelligence
- Machine Learning
- Programming

INTERESTS AND LEISURE ACTIVITIES

Hobbies: Programming.

REFERENCE

[1] Dr Tebogo Bokaba
Senior Lecturer, Applied Information Systems, UJ, South Africa
Email: tbokaba@uj.ac.za

[2] Prof Patrick Ndayizigamiye
Visiting Associate Professor, Applied Information Systems, UJ, South Africa
Email: ndayizigamiyep@uj.ac.za

[3] Prof Twinomurinzi Hossana
Vice Dean, College of Business and Economics, UJ, South Africa
Email: hossanat@uj.ac.za

[4] Mr Sandile Mhlanga
Lecturer, Applied Information Systems, UJ, South Africa
Email: smhlanga@uj.ac.za

[5] Dr Nazeer Joseph
HOD, Applied Information Systems, UJ, South Africa
Email: njoseph@uj.ac.za