



MINI-SCHOOL

NITheCS

National Institute for
Theoretical and Computational Sciences

Statistical Foundations of Data Science

Dr Farai Mlambo (Wits Business School)

Attend three online lectures:

Wednesday, 12, 19 & 26 November 2025 | 14h00-15h00 SAST

ABSTRACT

This mini-school will explore the core statistical principles that underpin modern data science, bridging classical inferential thinking with contemporary machine learning applications. The sessions will unpack key ideas such as probability theory, sampling distributions, hypothesis testing, regression modelling, and Bayesian reasoning, showing how these concepts provide the mathematical and interpretive backbone for data-driven decision-making in business, science, and policy contexts.

BIOGRAPHY



Dr Farai Mlambo is a Senior Lecturer in Digital Business and Data Analytics at Wits Business School, a Research Fellow at the Wits Machine Intelligence and Neural Discovery (MIND) Institute, and a Statistics Associate at NITheCS. He directs the Postgraduate Diploma in Digital Business at Wits Business School and leads the Statistical Machine Learning (Stat-ML) Lab. His research focuses on Bayesian methods, uncertainty quantification, and the application of AI in business, healthcare, and finance. Dr Mlambo holds a PhD in Mathematical Statistics and has over a decade of experience teaching and supervising postgraduate projects in statistics, data science, and business analytics. His teaching philosophy emphasises critical thinking, practical relevance, and interdisciplinary collaboration. Before joining Wits Business School, Dr Mlambo taught statistics for seven years in the School of Statistics and Actuarial Science at Wits, where he received two teaching awards. He is also the author of *A Survival Guide for Every Postgraduate Journey*.

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