

Bongo Kosa

AI and data systems engineer

Debrecen, Hungary

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[LinkedIn](#)

[GitHub](#)

I build governed AI systems and data pipelines that make decisions traceable, testable and accountable to people.

02 Profile

I work at the intersection of data engineering, governed AI and statistically validated decision systems. At MetaPOS, I build retail data workflows and MetaPOS Mind, a permission-aware context system for people and AI assistants.

03 Engineering focus

Core engineering	Python · SQL · BigQuery / GCP · Data modelling and quality · Permission-aware AI context · Statistical validation	Regular delivery tools	Git / GitHub · MCP · JSON Schema · YAML · Docker · Pandas / NumPy · Looker / Power BI
Additional experience	R · AWS · Scikit-learn · TensorFlow · Streamlit · Flask · Tableau		

04 Selected experience

Data Engineering Scientist MetaPOS

Sept 2023 to Present
Remote · Cape Town, South Africa

Builds retail data and governed AI-context systems that improve reliability, operational understanding and decision support within a point-of-sale environment.

- Works with Python, SQL and data modelling to support data pipelines and analytics workflows.
- Improves accuracy and efficiency in transaction, inventory and sales-related data processes.

Python · SQL · Google Cloud Platform · Data modelling · MCP · JSON Schema · YAML · AI-assistant integration

Learning Specialist 2U / edX

Oct 2023 to Jun 2025
Remote · Cape Town, South Africa

Supported learners across FinTech, AI and Data Visualization bootcamps delivered through multiple university partners under the 2U / edX umbrella.

- Tutored learners across FinTech, AI and Data Visualization programmes, including Git, GitHub, Python and machine-learning topics.
- Answered learner questions on the AskBCS platform and graded work against structured rubrics.

Git · GitHub · Python · Machine learning · AI bootcamp support · Data visualization · Assessment

Superagent Mentor Blossom Academy

Nov 2024 to Jun 2025
Remote · Greater Accra Region, Ghana

Mentored emerging talent pursuing paid freelance work and stronger market readiness.

- Guided mentees in freelance readiness, client communication and professional positioning.
- Supported confidence, practical next steps and consistent progress toward paid opportunities.

Mentoring · Career guidance · Technical communication

01 Selected systems

01 MetaPOS Mind

AI context and governance system

A Python and MCP-compatible context system that turns permission-scoped company knowledge into reliable working context for employees and AI assistants.

Python · MCP · JSON Schema · YAML · PyYAML · GitHub Projects · AI-assistant integration

02 OmniMind

Governed AI systems

A local AI-work control plane that compiles bounded, task-specific context and coordinates evidence, provider handoffs and human-approved capabilities without duplicating project data.

Python · MCP · Context engineering · Evidence gates · Capability routing

03 FXPM: validation and execution

Decision-system engineering

A production-focused trading research system combining regime-aware strategy selection, stateful optimisation, statistical validation and broker-aware execution controls.

Python · Numba · Optuna · MetaTrader 5 · Statistical validation

02 Research

Simulation and Historical Evaluation of Validation-Gate Design in a Regime-Adaptive Decision System

Co-author. Accepted for ISM 2026. Examines how validation gates shape a regime-adaptive decision system, separating simulation from historical evaluation and keeping the limits of both explicit.

Accepted paper. Proceedings details, publication date and DOI are not yet recorded.

03 Education

BSc in Engineering Management

University of Debrecen

Sept 2025 to Present

Debrecen, Hungary

Data Science Certificate

Explore AI Academy

Jan 2022 to Dec 2022

Cape Town, South Africa

Result: 85 percent

04 Selected credentials

Google Project Management Professional Certificate

Google, via Coursera

Completed August 2026

Associate Cloud Engineer Certification

Google Cloud

Active through 1 March 2027

Cloud Digital Leader Certification

Google Cloud

Active through 12 January 2027

Professional Data Scientist

DataCamp

Professional credential

Advanced Data Science Specialization

IBM via Coursera

Completed specialization

Applied Data Science Lab

WorldQuant University

Completed program