

Andrea Scholtz

Machine Learning Engineer

Profile

I'm a seasoned Machine Learning Engineer with expertise in MLOps and deployment pipelines that deliver tangible business impact. With 8+ years of experience automating ML workflows and building monitoring systems across banking and retail sectors, I excel in environments that value technical innovation over bureaucracy. I thrive in collaborative teams focused on practical solutions and measurable outcomes.

Please [view my website](#) for past, current and personal projects.

Details

Address

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Date of Birth

8 October 1986

Nationality

South African

Career Objective

Seeking a technical leadership role in MLOps or Generative AI within scientific organisations where innovation and research excellence take precedence over corporate bureaucracy. Particularly interested in HealthTech and BioTech opportunities where my mathematical modelling background may drive meaningful impact.

Work History

Sr Machine Learning Engineer Consultant – Equal Experts

Feb 2024 – current

Cape Town, South Africa

Achievements:

- Deployed an internal RAG Chatbot implementation at John Lewis Partnership **within three weeks** to assist partners in their move to the new address at 1 Drummond Gate.

Roles:

- **John Lewis Partnership, London, UK, March 2024 – present:**
 - **Maintain** the current Machine Learning Platform that was previously deployed for the Data Science Team.
 - **Improve** on the stated platform to streamline processes and aid in the ML development lifecycle.
 - Build a **new proprietary platform** for more advanced Machine Learning capability (including GenAI capability).
- **Medicine Sans Frontier (Doctors without Borders), London, UK, February – March 2024 (pro bono):**
 - **Productionisation/operationalisation** of Machine Learning models to model epidemics in remote areas.

Sr Machine Learning Engineer – Jumo

Apr 2022 – Jan 2024

Cape Town, South Africa

Achievements:

- Implemented an automated model deployment pipeline, drastically reducing deployment time from several days to hours:
 - Reduced deployment time from **several days to hours**.

Skills

Programming and ML

- Python
- ML Frameworks (e.g. Pytorch, Keras, scikit-learn)
- Experiment tracking and lifecycle management

MLOps and Software Engineering Principles

- MLOps Methodologies
- CI/CD and version control
- TDD and DDD

Infrastructure and Cloud

- Cloud computing platforms (GCP, AWS, Azure)
- Containerisation and orchestration (e.g. Docker and Kubernetes)

Product Development and Strategic Execution

- Data-driven Product Development
- ML Development Lifecycle Management and Agile Delivery
- Strategic Planning and execution of scalable ML solutions

Leadership & Communication

- Effective team leadership
- Strong Communication Skills
- Mentorship and cross-functional collaboration
- Stakeholder engagement and strategic alignment

- Played a key role in demonstrating technical capabilities for a **successful funding round**.
- Established a model monitoring system that **detected prediction drift in minutes** instead of weeks.
- Automated the model training service, enabling:
 - Data scientists to **train 50+ models daily** (up from ± 1 per week).
 - Portfolio refreshes **deployed in days rather than weeks**.
- Developed **generalised champion model architectures** across diverse financial portfolios, reducing development/experimentation time by $\pm 70\%$.

Role:

- Implement initiatives to enhance team services, improve efficiency across teams, and automate model deployment pipelines.
- Served as the Product Owner for a component of the Prediction Services Team, leading MLOps and fostering collaboration with the Decision Science Team.
- Took on a mentorship role, supervising and guiding junior software engineers.

Machine Learning Engineer – Jumo

Jun 2021 – Mar 2022

Cape Town, South Africa

Role:

- Created data and ML solutions for Jumo's digital banking platform.
- Automated scorecard deployment and ML pipelines.
- Fostered close collaboration with decision scientists and cross-functional teams.
- Developed production pipelines for models in cloud environments.
- Operationalised ML models for client projects.

Projects:

- Integrated multiple systems to deploy Machine Learning models to production quickly and efficiently.
- Developed an efficient production pipeline for deploying mass-scale ML models for predicting the probability of default on different segments.

Links

LinkedIn

<http://tiny.cc/AndreaScholtz>

Personal

<https://andreascholtz.tech>

Interests

Continuous Learning

Reading current research

Life Sciences

AI Ethics

Music

Education

M.Sc., Applied Mathematics

(cum laude)

North-West University,

Potchefstroom

(2013 – 2015)

Specialization in Numerical Analysis, Control Theory, Optimization and Mathematical Epidemiology.

B.Sc.Hons., Applied Mathematics

(cum laude)

North-West University,

Potchefstroom

(2012)

Awarded Best Student in Mathematics 2012

B.Sc., Computer and Mathematical Science (cum laude)

North-West University,

Potchefstroom

(2007 – 2011)

Machine Learning Engineer – Praelexis

Oct 2016 – Jun 2021

Stellenbosch, South Africa

Role:

- Developed data and machine learning solutions for Retail banking (Capitec, 2016–2019) and Private banking (Investec 2019–2021).
- Developed production pipelines for models in cloud environments.
- Delivered support for our proprietary Machine Learning platform.
- Designed software and systems architecture and infrastructure.
- Conceptualised and implemented machine learning models for client projects.
- Managed data exploration, management, and manipulation.

Projects:

- Cognitive Banking Platform for Investec:
 - Architected and implemented an ML-powered client behavioural analysis platform.
 - Reduced manual classification work by $\pm 60\%$ through intelligent transaction categorisation.
- Cognitive Banking platform for Capitec Bank
 - Developed and productionised a client-centric cognitive platform on Microsoft Azure.
 - Daily builds of the Client Profile refreshing important client data while adhering to strict Data Regulations.
 - First live implementation of SMS sent to customers highlighting fees vs. interest for each financial month.
- Statement Automation modelling for Capitec Bank – Developed and productionised a proprietary Machine Learning model.

Lecturer – North-West University

Jan 2014 – Sep 2016

Potchefstroom, South Africa

Role:

- Lectured various Pure and Applied Mathematics modules to undergraduate students: Mathematical Modelling, Linear Algebra, Ordinary Differential Equations, Mathematical Optimisation.

Junior Lecturer – CTI Education Group

Aug 2011 – May 2014

Potchefstroom, South Africa

Role:

- Lectured Statistics and Mathematics for Social Sciences to undergraduate students.