

CURRICULUM VITAE: JACO MOOLMAN

Email: jacomoolman1890@gmail.com

Phone: +27 (0)832002165

LinkedIn: <https://www.linkedin.com/in/mr-jaco-moolman/>

GitHub: <https://github.com/JacoMoolman>

CV: <https://jacomoolman.co.za/curriculum-vitae/> Personal Projects: <https://jacomoolman.co.za/projects/>

OVERVIEW

I am a versatile information technology (IT) professional with over 20 years of experience across the Banking, Telecommunications, Insurance, and IT sectors. My expertise includes a comprehensive understanding of IT infrastructure, cloud computing, and artificial intelligence (AI), which I draw on to address defined operational objectives and strategic imperatives. I am certified in multiple Linux operating systems and AWS cloud technologies, and am proficient in Python, Bash, and PowerShell. My experience has expanded over time from automation of system administration to implementation of machine learning (ML) models. My approach to work is driven by a passion for innovative problem-solving. I am continually expanding my skillset through AI-focused personal projects and participation in Kaggle competitions, which allow me to gain hands-on experience in building ML models while leveraging the latest tools to optimize workflows and drive technological progress. As an out-of-the-box thinker, I thrive on challenges that require creative solutions in dynamic IT environments.

SUMMARY OF EMPLOYMENT

CAPITEC	<i>Machine learning engineer, Level 1</i>	<i>2022 – current</i>
	<i>Automation Engineer</i>	<i>2017-2021</i>
FIRST NATIONAL BANK	<i>Software support Engineer</i>	<i>2015 - 2017</i>
SPI	<i>Systems & Software Specialist</i>	<i>2015 - 2015</i>
MTN	<i>System Administrator (AIX)</i>	<i>2012 - 2015</i>
IBM	<i>System Administrator (AIX)</i>	<i>2007 - 2012</i>
	<i>Systems Operations Monitor</i>	<i>2006 - 2006</i>
DISCOVERY HEALTH PTY LTD	<i>Systems Operations Monitor</i>	<i>2001 – 2006</i>
JOHANNESBURG STOCK EXCHANGE	<i>Systems Operations Monitor</i>	<i>2000 - 2001</i>
SOUTH AFRICAN RESERVE BANK	<i>Systems Operations Monitor</i>	<i>1999 - 2000</i>
BRUNEL	<i>Information Technology Administrator</i>	<i>1998 - 1999</i>

REFERENCES

1. [Francois Ferreira](#), Team Lead, AI Platform, Capitec, francoisferreira@capitecbank.co.za
2. [James Ostrowick](#), Manager at FNB (now Capitec), jamesostrowick@capitecbank.co.za
3. [Deon Naude](#), Manger & team lead at MTN, naude_d@mtn.co.za

Additional references can be found here: <https://jacomoolman.co.za/references/>

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SKILLSET AND SYSTEM APPLICATION EXPERIENCE

Programming & Scripting

- Python, BASH (VIM), Powershell, MQL4/5, Terraform; DOS Batch; Tandem, Pascal, Basic

Continuous integration and change delivery (CICD)

- MLFlow, Bamboo, Gitlab, GitHub, Jenkins, BitBucket

Cloud computing

- AWS: Sagemaker (Studio, DataWrangler, Notebooks, Autopilot), Lambda, CloudWatch & Trail, Textract, API, S3, IAM, Cost Explorer, Polly, Athena, EC2, Event Bridge, Resource Group, Step Functions

Server Administration

- Centos, AIX, HP-UX, Red Hat, Solaris, MS Windows Server

Server Virtualisation

- VMWare, Virt-Manager, Windows Hyper-V, VirtualBox, AIX HMC, KVM, Docker, Anaconda, Singularity

Ticketing & Workload management

- ITSM, Jira, Remedy Service desk, CA Service desk/ USD,

Programme Scheduling

- Control-M, Linux Cron, Go Anywhere (Managed File Transfer / MFT)

Monitoring, Troubleshooting & Analysis

- Kibana, Elastic Search (Elk Stack), Zabbix, Nagios, Dynatrace, Jmeter, Tivoli Tec

Databases

- MYSQL, MSSQL, Postgress,

Other

- MetaTrader, ACS Software (Modurum), Postman, Windows 7-11, Office 365

CERTIFICATIONS

AWS Certification in Machine Learning Speciality	2023
AWS Cloud Practitioner	2019
Agile Certified Disciplined Agilist	2017
RED HAT Certified System Administrator (Linux 7)	2017
IBM System Administrator (AIX 7)	2014

PRESENTATIONS

1. Generative AI and the impact on the modern work life. <https://tinyurl.com/genaitalk1>
2. Presentation at Tech MeetUp demonstrating the use of gen AI for the blind. <https://tinyurl.com/genaitalk2>

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PERSONAL PROJECTS

Some highlights are mentioned below, and all my projects can be seen here: <https://jacomoolman.co.za/projects/>

1. Created a chatbot for recruiters to have a virtual interview with me.
<https://jacomoolman.co.za/livechatbot/>
I used OpenAI to build a R.A.G. system. Hosted an API online that in turn uses custom HTML to create a chat interface on my site.
2. Build an end-to-end P.O.C. application to aid visually impaired navigate the world around them.
<https://jacomoolman.co.za/snapsight/>
Using gen AI, cloud computing, Android app development, AWS, vision Api, text to speech and more to build the end-to-end application.
3. Designed a system using generative AI to generate self-improving and self-correcting AI models.
<https://jacomoolman.co.za/auto-code-bot/>
Used LLMs like GPT to autonomously generate ML code that iteratively self-improve over time including testing of the models.
4. Used python to automate the generation of realistic synthetic bank statements for fraud.
<https://jacomoolman.co.za/trainingbankstatements/>
Generated "real" and "fraudulent" pdf bank statements for training AI anomaly detection algorithms.
5. Using genetic algorithms for experimentation whether lotto numbers can be predicted.
<https://jacomoolman.co.za/genetic-lotto/>
Using pure PowerShell scripting to design and graph genetic algorithms for research and upskilling.
6. Started a fully automated YouTube channel to generate and jokes videos.
<https://jacomoolman.co.za/automating-youtube-fame/>
Using only Python I generated joke videos, including audio, background and text then automatically them.
7. Using generative AI to automate the tracking of grocery expenditure.
<https://jacomoolman.co.za/ai-shopping-list/>
Using just photos of receipts, I automated the text extraction (OCR) and generation of monthly food cost.

OTHER TRAININGS

MLflow in Action - Master the art of MLOps using MLflow tool (Udemy)	2024
A Modern & essential guide to Mastering the Python programming language (Udemy)	2024
AWS Solutions Architect Associate (SAA-C03) (Udemy)	2023
Introduction to Machine Learning 2021 (Kaggle)	2021
Data and Analytics Foundation Programme (Capitec Leading Edge Academy)	2021
Python for beginners (Simplilearn)	2021
Data analytics Fundamentals (AWS)	2021
MySQL for Beginners (Torque IT)	2016
CA Service Desk Manager (CA Southern Africa)	2011
SA200-S10 Intermediate System Administration for Solaris 10 OS (Sun microsystems)	2005
SA 118 Fundamentals of Solaris (Sun microsystems)	2003
Tandem Concept & Facilities (Tandem)	2001
Matric Senior Certificate	1998

Copies of certificates available at <https://jacomoolman.co.za/curriculum-vitae/>