

# Lethogonolo Fanampe

AI/ML Engineer / Gen AI / NLP / Python Developer

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🚩 South Africa (Remote)

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## 👤 PROFILE

AI/ML Engineer with a deep passion for developing innovative solutions using Generative AI and NLP technologies. Experienced in building, fine-tuning, and deploying LLMs for diverse applications, including fake news detection, creative text generation, and multimodal interactions. Proven track record in winning hackathons and delivering high-impact AI solutions. Certified in Python development, Generative AI, and web development, with a strong foundation in analytical chemistry.

## 🧠 SKILLS

### Programming & Development

- Python, JavaScript (ReactJS, NodeJS)
- Django, Flask, Streamlit
- SQLite

### Tools & Technologies

- Agile Methodologies
- Data Visualization Tools
- Git, Docker (Version Control & Deployment)

### Technical Skills

- Laboratory Testing, Quality Control, Data Analysis
- Technical Analysis, Equipment Maintenance, Data Management

### AI/ML & Data Science

- TensorFlow, Keras, OpenCV
- Natural Language Processing (NLP), OCR Technologies
- AI/ML Model Integration and Optimization

### Soft Skills

- Problem Solving & Critical Thinking
- Team Collaboration in AI/ML Projects
- Strong Communication of Technical Concepts

## 📁 PROFESSIONAL EXPERIENCE

November 2024 – present  
Remote

### AI/ML Consultant Kwantu PTY LTD

- Developed and deployed multiple chatbot solutions (RAG PDF, RAG SQL, NLP Demo) using LangChain, FastAPI, and various LLMs (Mixtral-8x7B, Together AI), integrating with WhatsApp Business API and Telegram.
- Engineered a robust data pipeline for South African ID document recognition, including data cleaning, annotation (Label Studio), model training (Detectron2), and OCR integration (Tesseract).
- Managed server infrastructure (CentOS), including deployment, configuration of systemd services, Nginx reverse proxy setup, and troubleshooting connectivity issues.
- Continuously optimized and debugged chatbot applications, addressing issues with response formatting, language translation, API integrations, and server stability, resulting in a functional multi-lingual AI.
- Collaborated with team members (Willem, Rob, Vuyokazi, Abanathi, Hassan) on tasks ranging from frontend development and API integration to troubleshooting deployment and annotation challenges.
- Extensive research of multiple language models and platforms, including open-source and API-based (e.g Replicate, Together AI).

July 2024 – present  
Remote

### Software Engineer for AI Training Data G2i (Contract)

- Worked with the Outlier platform to enhance AI performance using RLHF (Reinforcement Learning with Human Feedback).
- Verified training data and evaluated AI model outputs to improve accuracy and reliability.
- Focused on AI/ML, computer vision, and Python to drive innovative AI solutions.

February 2024 –  
October 2024  
Pretoria, Gauteng,  
South Africa (Remote)

### Freelance AI Developer & Hackathon Participant

- Created AI applications in NLP, speech synthesis, and machine learning.
- Developed "Vocal Thread," an AI-powered tool that converts YouTube comments into speech using ElevenLabs' API.

October 2024 –  
December 2024  
Remote


### AI Prompt Evaluator

*Translated / Contract*

- Enhanced AI-generated responses for a GPU enterprise client.
- Optimized prompts in fields like medical, legal, and finance, using RLHF techniques.


September 2024  
Remote

### Geekle.us Hackathon FR1 Team Member

*Geekle.us / Contract* 

- Developed a one-click solution launcher integrating GitHub, Gitpod, and Claude AI (Anthropic API).
- Worked on repository management, workspace creation, and conversational AI integration.

**Github link:** <https://github.com/djpapzin/solution-launcher-backend> 

**Verification link:** <https://verification.givemycertificate.com/v/4d988adc-325e-4315-9287-f613901b4bf8> 

**Live Demo Presentation:** [https://www.youtube.com/live/Q13Av4bKnRo?si=lzu-FK-1n-fb\\_98r](https://www.youtube.com/live/Q13Av4bKnRo?si=lzu-FK-1n-fb_98r) 

## PROJECTS

September 2024 –  
October 2024

### Vocal Thread

*AI-Powered YouTube Comment Analysis*

- Developed an AI-powered web app that converts YouTube comments into engaging audio.
- Implemented sentiment analysis and a "Chat with Comments" feature using ElevenLabs and Google's Gemini.
- Built for the ElevenLabs AI Audio Challenge, enhancing accessibility and engagement with YouTube discussions.

July 2024

### Quixflow

*AI-Powered JIRA Optimization Tool*

- Built an automation tool for JIRA workflows using voice commands.
- Streamlined ticket creation, task assignment, and project management.

### TruthGuard

*AI Fake News Detection System*

- Created a system using Llama 3 for real-time fake news detection across platforms.
- Developed content moderation tools to enhance platform reliability.

December 2023 –  
January 2024

### ChatSnap-Extractor

*Chat Screenshot Text Extraction*

- Created a Python-based script to extract text, timestamps, and emojis from chat screenshots with 99% accuracy.
- Developed for **Next Sapien**, ensuring high precision in text extraction for reliable analysis.

November 2023 –  
December 2023

### NextSapien Facial Analysis

*AI-Based Demographic Insights*

- Engineered an AI-driven facial analysis tool for Next Sapien, focusing on gender identification and demographic insights.
- Utilized computer vision techniques to assess face rating and demographic trends.

August 2023

### VisualPro – WebGPU Backend with Data Visualization

*Winner of the WebGPU Hackathon - One-Day Challenge*

- Developed a backend for WebGPU to process user input and render 3D data.
- Designed API endpoints with Node.js and integrated SQLite for data storage.
- Collaborated on creating a 3D bar chart using Three.js, winning the hackathon.

## EDUCATION

January 2010 –  
July 2015  
Pretoria, South Africa

### **National Diploma: Analytical Chemistry** *Tshwane University of Technology*

- Completed coursework in analytical chemistry, inorganic and organic chemistry, physics, and mathematics.
- Acquired hands-on laboratory experience in practical chemistry courses.
- Demonstrated expertise in chemical quality assurance and computer applications.

January 2005 –  
December 2009  
Pretoria, South Africa

### **National Senior Certificate: Grade 12** *Pretoria Technical High School*

- Studied English, Afrikaans, mathematics, life orientation, electrical technology, information technology, and physical sciences.

## CERTIFICATES

- LangChain & Vector Databases in Production [🔗](#)
- WebGPU Hackathon - Outstanding Performance [🔗](#)
- Mimo Web Development & Programming Mastery [🔗](#)
- AI & Automation Hackathon – LabLab.ai [🔗](#)
- WebGPU Hackathon – Team Recognition Award by LabLab.ai [🔗](#)
- Front End Development Libraries Developer Certification [🔗](#)
- Responsive Web Design Developer Certification [🔗](#)
- MS Excel Fundamentals & Intermediate 2010 [🔗](#)
- Advanced GPT-3 Applications – LabLab.ai [🔗](#)
- Autonomous Agents Hackathon – Project Submission Certificate [🔗](#)
- Autonomous Agents Hackathon [🔗](#)
- Data Visualization Developer Certification [🔗](#)
- Career Essentials in System Administration by Microsoft and LinkedIn [🔗](#)
- AI-Powered Data Science Solutions – LabLab.ai [🔗](#)
- Geekle.us hackathon FR1 team [🔗](#)

## COURSES

September 2023

### **LangChain & Vector Databases in Production** *ActiveLoop*

- Gained expertise in foundational AI model theory and hands-on experience with LangChain and Deep Lake technologies.
- Focused on applying Large Language Models (LLMs) across industries.

August 2023

### **Master Python 3** *Udemy*

- Completed a comprehensive course covering Python 3 programming, from basics like syntax and data types to advanced topics such as data structures and functions.
- Acquired skills in setting up Python environments and developing efficient Python-based applications.

March 2023

### **Career Essentials in System Administration** *Microsoft & LinkedIn*

- Mastered system administration fundamentals, including managing on-premises, cloud, physical, and virtual environments.
- Gained expertise in storage security and career advancement in system administration.

February 2023

### **UML and Object-Oriented Design Foundations** *Udemy*

- Developed a strong foundation in Unified Modeling Language (UML) and object-oriented design principles.
- Designed and implemented a Note-Taking App using UML diagrams and Agile methodologies.

## REFERENCES

**Robert Worthington**, *Team Leader*, Kwantu PTY LTD

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**Gift Olifant**, *Lab manager*, Afrisam

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**Mudassir Fayaz**,

*Mentor | Hackathon Team Leader | Frontend Engineer | Hackathon Winner | BSCS'24 | AI & ML Enthusiast | medium writer | leetcoder*

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**Robin (Bintang) T**, *Regional PM at Sea | ex. Astra | Lablab.ai Hackathon Team Member*

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