Mbali Sithandiwe Madlala

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Career Objective

Analytical BSc graduate in **Computer Science & Statistics** with hands-on **AI/ML bootcamp experience** in Python, machine learning frameworks, and full-stack development. Skilled in building deployable AI applications, sentiment analysis systems, and bias mitigation solutions. Seeking an **entry-level AI/ML Engineer or Data Scientist** role to contribute to innovative, data-driven projects in technology-focused organizations.

Education

CAPACITI AI/ML Bootcamp (AI Learnership Programme) – CAPACITI Tech Career Accelerator | *2025*

- Intensive program covering AI fundamentals, machine learning pipelines, NLP, ethical AI, and end-to-end solution development.

- Completed multiple individual and group projects integrating APIs, ML models, and deployed applications.

Bachelor of Science (BSc) in Computer Science & Statistics – University of KwaZulu-Natal | *2021 – 2024*

- Dean's Commendation (Second Year)

- Golden Key International Honour Society Member (since 2022)

Technical & Quantitative Skills

- **Programming & Data Analysis:** Python, SAS, SQL, JavaScript/TypeScript

- **Frontend & Web:** React, Next.js, HTML, CSS, Tailwind CSS, Vite

- **AI / Machine Learning:** Hugging Face Transformers, Scikit-learn, Streamlit, Botpress, AWS Comprehend, AIF360 (bias mitigation), NLP (sentiment analysis, content generation)

- **Statistics & Modeling:** Statistical inference, optimization, predictive modeling, fairness metrics

- **Tools & Platforms:** Git, Google Colab, Excel

Projects

AI/ML Bootcamp Projects – CAPACITI | *2025*

- **Tab2Dine – Capstone Project (Group, End-to-End AI Solution):**
  Developed a smart restaurant application integrating language models, vision/speech AI, and data systems for ordering, recommendations, and payments. Contributed to frontend development (React/Next.js) and ML-driven features. Deployed a functional prototype that improved user experience by **30% during testing**.
  Technologies: Next.js, Streamlit, Hugging Face APIs

- **Bias Audit Report (Group):**
  Conducted a fairness and bias analysis on the Adult Income dataset using **AIF360**. Implemented three fairness metrics and two bias mitigation techniques (including Prejudice Remover), reducing outcome disparity by **25%**. Delivered an ethics-focused report with visualizations for non-technical stakeholders.

- **Sentiment Analysis Dashboard (Group):**
  Built an interactive **Streamlit dashboard** for multi-class sentiment classification (positive, negative, neutral). Integrated **AWS Comprehend** for NLP tasks, keyword extraction, and visual analytics. Achieved **85% classification accuracy** on 50+ text samples with exportable CSV/JSON/PDF outputs.

- **AI Resume Builder (Individual Project):**
  Designed and deployed an AI-powered resume builder generating **ATS-optimized resumes** using LLM-based suggestions (GPT, Claude, Gemini). Implemented job matching, feedback loops, three resume templates, and PDF export functionality. Deployed via Streamlit with a public demo link.

- **AI LearnMate (Integrated Project):**
  Created an educational assistant combining a chatbot (Botpress), content generation (Hugging Face), and quiz functionality. Enabled personalized learning paths for beginner to intermediate users, generating AI study guides and quizzes using structured prompt templates.

Experience

Tutor & Demonstrator – University of KwaZulu-Natal | *Mar 2024 – Nov 2024*

- Tutored and supported **100+ first-year students** in Python, Excel, HTML, and algorithmic thinking.

- Mentored students in problem-solving strategies and academic planning, contributing to improved performance outcomes.

- Developed strong communication, leadership, and collaborative skills in a technical learning environment.

Certifications

- **AI/ML Bootcamp Certificate** – CAPACITI Tech Career Accelerator | 2025

- **Full Stack Development Certificate** – FNB App Academy | 2025

Soft Skills

- Analytical thinking

- Problem-solving

- Communication

- Teamwork & collaboration

- Adaptability

- Time management