Perfect-Princess Makuwerere

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Summary

Master's candidate in Applied Artificial Intelligence with hands-on experience in Python, machine learning, and deep learning frameworks. Demonstrated software engineering skills, optimizing application performance and stability in demanding environments. Brings a strong foundation in NLP and data processing techniques to design, evaluate, and deploy data-driven solutions.

Education

Stevens Institute of Technology **May 2026**
Master of Science, Applied Artificial Intelligence
- **Achievements:** Graduate Student Ambassador

University of Zimbabwe **Jul 2024**
Bachelor of Science (Honors), Artificial Intelligence and Machine Learning
- **Achievements:** Campus Lead for Google Developers Students Club at the University of Zimbabwe.

Experience

Afrosoft Holdings **Sep 2022 - Aug 2023**
Software Engineer Intern *Harare, Zimbabwe*
- Diagnosed and resolved critical software bugs using Python and agile development methods, enhancing application stability and user experience across multiple platforms and devices.
- Utilized the Spring Boot framework to develop robust applications, incorporating data visualization techniques to monitor performance and improve reliability by 20% within 4 months.
- Implemented software enhancements that increased user satisfaction by 35%, integrating machine learning best practices to optimize system responses.
- Engineered scalable software solutions capable of supporting over 500 concurrent users, applying version control strategies and agile methodologies to ensure seamless functionality and performance.

Research Projects

Fine-tuning GPT-2 for Technical Document **May 2025**
Stevens Institute of Technology
- Fine-tuned GPT-2 on a curated dataset of technical and academic documents
- Improved the model's ability to summarize complex texts.
- Applied transfer learning with optimized hyperparameter tuning for domain specific adaptation.
- Evaluated summaries using ROUGE and BLEU metrics to ensure relevance and coherence.

Large Language Model for Shona Language **Jul 2024**
University of Zimbabwe
- Developed a Shona language model using transformer architecture
- Collected and cleaned a corpus of around 5000 sentences, reducing noise by about 20%.
- Fine-tuned a pretrained transformer, lowering perplexity by roughly 15% from baseline.
- Deployed the model via a REST API

Skills

- **Programming & Tools**: Python, REST API Development, Version Control, Agile Development
- **Machine Learning & AI**: Machine Learning & Deep Learning, Machine Learning (TensorFlow , PyTorch, NumPy, SK-Learn)
- **Specialized Technologies**: Hugging Face Transformers, Transformer Architectures (GPT-2, BERT, Vision Transformers), LangChain, Natural Language Processing, Data Visualization