

Mark Phillip Matovic

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Profile

With a strong academic foundation in Engineering Artificial Intelligence, I am at a pivotal stage where I have gained comprehensive knowledge and hands-on experience in AI, machine learning, and advanced data-driven methodologies. I am excited to bring my technical knowledge, analytical mindset, and eagerness to learn into a professional setting, where I can make meaningful contributions and deepen my expertise.

Experience

Carnegie Mellon University | Rwanda, Kigali

Intern | 06/2024 - 08/2024

- Utilized 3D diffusion models to enhance and refine existing 3D designs
- Collaborated with a PhD student to optimize and improve the topology of generated models

Marconi Machine learning Lab | Uganda, Kampala

Machine learning Researcher | 01/2021 - 06/2023

Multilabel classification of Lung Ultrasound artifacts

- Assisted in crafting the project protocol for an ultrasound project aimed at data collection by doctors. Ensured compliance with ethical standards and project guidelines.
- Provided comprehensive technical support to medical professionals, including troubleshooting ultrasound devices and setting up an online data collection tool.
- Designed and implemented machine learning models to classify lung ultrasound artifacts. Conducted thorough evaluations of model performance using specificity and sensitivity.

Education

Carnegie Mellon University | Kigali, Rwanda

Master of Science in Engineering Artificial Intelligence | 05/2025

Makerere University | Kampala, Uganda

Bachelor of Science in Electrical Engineering | 05/2020

Graduated with 4.23/5.0

Skills

Machine learning, Pytorch, Tensorflow, Git, Deep learning, Data Visualization, Computer Vision, Natural Language Processing

Academic Projects

Vulnerability Assessment using LLMs (Capstone)

- Utilized a large language model in conjunction with a scoring tool to assess and score vulnerabilities based on submitted reports. Enhanced the assessment process by automating language model responses to improve accuracy in vulnerability classification and severity scoring.

Speech to Speech Machine Translation Using Different Modalities for Low Resource Languages

- Developed a cascaded transfer learning pipeline to improve translation for low-resource languages, integrating pre-trained models for Speech-to-Text (STT), Machine Translation (MT), and Text-to-Speech (TTS). Leveraged SpeechT5 for STT/TTS and T5forConditionalGeneration for MT, with pre-training on high-resource languages and fine-tuning on low-resource data, enhancing translation quality and robustness.