Moses Makola

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EDUCATION

UNIVERSITY OF LEEDS **2025-2027**
MSc Data Science (Statistics)

QUEEN MARY'S UNIVERSITY OF LONDON **2021-2024**
BSc Computing

PROFESSIONAL EXPERIENCE

THE ALAN TURING INSTITUTE **London, UK**
Research Data Science Intern **Jun 2025 - Aug 2025**

- Ported epidemiological modelling materials from R/Stan into Julia, improving accessibility and integration within the open-source Turing.jl ecosystem.
- Developed simulation utilities for generation infection timelines and delay distributions, enabling easier experimentation with epidemiological models.
- Implemented statistical models in Turing.jl for estimating epidemiological parameters, including delay distributions with censoring and truncation adjustments.

J.P MORGAN CHASE & CO. **London, UK**
Software Engineer Intern **Jun 2023 - Aug 2023**

- Collaborated with cross-functional teams to design and prototype a FIX RFQ (time-series) message handler successfully replacing the previous system and improving trading efficiency and request processing.
- Presented the project proposal to the global team, demonstrating strong communication skills to ensure alignment across team members.
- Spearheaded the development of an improved manual submission system for prices by processing submissions from SharePoint, enhancing data accuracy and streamlining workflows for improved efficiency.

PROJECTS

Synthetic Voice Translation for Low-Resource Languages **Mar 2025**

- Engineered a speech translation system to generate synthetic voices for underrepresented languages.
- Fine-tuned the VITS OpenBible model on specific language corpora, enhancing pronunciation and speech clariy.
- Implemented Speech-to-Text, Machine Translation and Text-to-Speech pipelines to automate voice translation.
- Presented project findings at Tech Show London's Big Data & AI World 2025.

Automatic Speech Recognition for Low-Resource Languages [Google Colab] **Dec 2024**

- Fine-tuned XLSR-53 on the Lingala Read Speech Corpus, achieving a Word Error Rate (WER) of 0.21.
- Preprocessed audio data by standardising sampling rates, creating vocabulary files, and mapping text transcriptions.
- Presented the project to 100+ attendees at the UKBlackTech Christmas Social, demonstrating its value for underrepresented linguistic communities.

Sickle Cell CNN Classifier [Kaggle] **Nov 2024**

- Developed a Convolutional Neural Network (CNN) model using PyTorch to classify blood samples as sickle cell positive or negative with 97.65% validation accuracy and 95.51% test accuracy.
- Addressed class imbalance using weighted loss functions and conducted PCA analysis to explore feature separability.
- Cited in "An Image-based Sickle Cell Detection Method" (TechRxiv) by dataset creator for contributions to methodology and dataset application.

ADDITIONAL INFORMATION

- **Languages/Libraries:** Python (pandas, Scikit-learn, PyTorch, NumPy, Matplotlib), SQL, R, FastAPI, Julia
- **Frameworks/Technologies:** AWS, Tableau, Git, Postman, Github Actions