

Charlesquin Kemajou Mbakam

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Summary

Highly motivated and results-oriented recent PhD graduate in Actuarial Science from Heriot-Watt University seeking a Machine Learning Scientist position. Experienced in developing cutting-edge ML models using statistical modelling, deep learning, and time series analysis, delivering robust and optimized data-driven solutions. Strong communication, collaboration and teaching skills honed through 4 years of experience as researcher and Teaching Assistant. Eager to leverage my research and analytical skills to contribute to a challenging and innovative machine learning team.

Core skills and Area of expertise

- **Machine Learning:** Supervised and Unsupervised Learning, Deep learning, Generative AI, Reinforcement learning, Large Language Models (LLM) and Natural Language Processing (NLP).
- **Data scientist & Analyst:** Data cleaning, Preprocessing and Exploration, Statistical Modelling, Hypothesis Testing, Time Series Analysis, Clustering, Linear & Logistic regression, Dimension reduction (PCA, TSNE), model evaluation and deployment.
- **Data Visualization:** Matplotlib, Seaborn, Plotly.
- **Computer Vision:** Image Classification, Object Detection, Image Restoration, Generative models.
- **Programming Languages:** Python (Pandas, NumPy, Scikit-learn, TensorFlow/PyTorch, Keras), R (dplyr, ggplot2), C++, Java, Java script, PHP, HTML, Django, bash script.
- **Other tools:** Git, Visual code, PyCharm, Eclipse, Anaconda, Excel, Power point, Word.
- **Cloud & Deployment:** Gradio, CUDA, AWS, Hugging Face I IBM.
- **Databases:** SQL, MySQL, NoSQL (MongoDB).
- **Languages:** English, French.

Professional Experience

Associate researcher, *Heriot-Watt University, Edinburgh, UK*

Jul. 2024 - Oct 2024

- Designed conditional diffusion models for image restoration, incorporating conditioning information to guide the generative process.

- Developed efficient sampling strategies that enhance accuracy and robustness.
- Fine-tuned generative models.

Teaching Assistant, *Heriot-Watt University, Edinburgh, UK*

Sep. 2021 - Nov 2023

- Lead tutorials and lab sessions, guiding students and clarifying concepts.
- Support student understanding of course material through effective problem-solving demonstrations.
- Facilitate engaging discussions, answer questions, and troubleshoot technical issues.
- Bridge theory and practice, ensuring students apply knowledge effectively.
- Provide constructive feedback and assess student progress.
- Cultivate a positive and productive learning environment.

Web designer (Intern), *Chamber of Commerce, (CCIMA), Douala, Cameroon* Jun 2018 - Nov 2018

- Designed and developed a web application with an intuitive user interface for streamlined data collection and management.
- Implemented a robust backend for secure data storage, retrieval, and efficient handling of large datasets.
- Optimized performance to handle large datasets efficiently.
- Data collection using SPSS.

Education

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| • Doctor of philosophy in Actuarial science and Statistics
<i>Heriot Watt University, Edinburgh, UK</i> | Jan. 2021 – Dec. 2024 |
| • Master's Degree in Machine Intelligence
<i>African Institute for Mathematical Sciences (AIMS), Limbe, Cameroon</i> | Oct. 2019 – Dec. 2020 |
| • Master's degree in applied mathematics
<i>University of Dschang, Cameroon</i> | Oct 2015 – Sep. 2017 |
| • Bachelor's degree in mathematics and computer sciences
<i>University of Dschang, Cameroon</i> | Oct. 2012 – Sep. 2015 |

Interests

- Soccer, Reading, Hiking, Sci-Fi Movies