

# COLLINS MWAURA

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## PROFILE

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I am a passionate developer with a keen interest in Data Science in Machine Learning and A.I. Currently pursuing a B.Sc. in Computer Science at Chuka University. I am actively involved in researching on LLMs and Computer Vision and ways to incorporate them in fields of agriculture and health care.

## EDUCATION

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### Chuka University

*B.Sc. Computer Science*

**Chuka, KE**

*September 2021 – Present*

- **Relevant Courses:** Artificial Intelligence, Introduction to Communications, Techno-preneurship, Web Design, Development and Administration, Analysis and Design of Algorithms, Software Engineering, Data Structures and Algorithms.

### Molo Secondary School

*High-school Certificate*

**Chuka, KE**

*Jan 2016 – April 2021*

- **Certificate:** B+

## SKILLS & INTERESTS

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**Core Skills:** Analytical Thinking | Problem Solving | Collaboration

**Languages:** Java | Python | C++

**Technical Skills:** Pandas | Numpy | Matplotlib | Scikit-Learn | PyTorch | TensorFlow | LangChain |

SpringBoot | JavaFX | AWT | Django | Django REST | Selenium | BeautifulSoup | AWS | Docker

**Soft Skills:** Communication | Team Leadership

**Certifications:** Huawei Mobile Communication Evolution

**Others:** Microsoft Excel | Microsoft PowerPoint

## PROJECTS

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### [TENSOR-SNOW – PYTHON PACKAGE](#)

*Personal Project*

- This is a deep learning library implementing the common functionalities of the Tensorflow library and its Keras API.
- The aim was to reduce the size of the library for simple deep-learning projects and but also understand the core of the TF library
- It was built using C++ and Python and to support GPU computation I used NVIDIA GPU support and OpenCL for cross-platform GPU support

### TINY-MISTRAL

#### *Personal Project*

- I have developed an implementation of the decoder model from Mistral7B from scratch.
- The model uses rotary embeddings, grouped query attention and K-V Cache. I used weight tying to improve the performance of the original model.
- I implemented the model using PyTorch and used the HuggingFace library to obtain the weights of the original model.

### Chess GUI Application

#### *Personal Project*

- I have successfully created a Chess GUI Java application, demonstrating my proficiency in Java programming and GUI development. This app offers a user-friendly interface for playing chess
- This project not only showcases my skills in Java but also highlights my commitment to creating engaging and interactive applications.
- I was able to grow in skill with JavaFX and AWT by about 90%.
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### Career Connection WebApp

#### *Team Project*

- I managed to be one of the lead developers who developed a web app to connect students to internship and attachment programs. Students get to connect with mentors and get career advice and resume reviews.
  - The system was developed using SpringBoot for the back-end and for the front-end it was made using HTML, CSS and JavaScript. It also harnesses the power of web scraping using Selenium to get job opportunities from other websites.
  - I was assigned to work with the back end alongside some of my teammates working solely on SpringBoot and Selenium using Java.
  - This application sharpened my skills in SpringBoot and enhanced my teamwork abilities and working with a moderately large code base.
  - My backend skills with SpringBoot grew with about 70% with this project. My communication skills and Team Leadership were also on the spotlight when working on this project.
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