Nairobi, Kenya
Caldwell Kibe
+254742453295
caldwellkibe@gmail.com
www.caldwellwachira.com
www.linkedin.com/in/caldwell-wachira/
https://github.com/Caldwell10

Education

Nairobi, Kenya **Strathmore University** **June 2022- July 2026**

- **Major**: Informatics and Computer Science(GPA: 3.68)
- **Relevant coursework:** Artificial Intelligence, Data Structures and Algorithms, Machine Learning, Advanced Database Systems, Computer Graphics.

Work Experience

Research Intern **Centre of Data Science and Artificial Intelligence(DSAIL)** **Jan 2025 – April 2025**

- Developed a production-ready model **BERT-based** sentiment analysis model for increasing text classification accuracy **by 87%** across **10,000+ samples**.
- Engineered an AI pipeline for vegetation health, optimizing tree-planting location accuracy and improving reforestation efficiency by **20%**.

Projects

Personal website: www.caldwellwachira.com (for additional information and projects)

CVE Chatbot for Cybersecurity Awareness | *Demo* | *Source Code*

Technologies: *Python, Flask, JavaScript*

- Developed and deployed a chatbot that retrieves and filters **CVE (Common Vulnerabilities and Exposures)** data, reducing manual lookup time by **50%**
- Processed **100+** CVEs daily during testing, ensuring timely information delivery of actionable cybersecurity insights to users.
- Implemented **RESTful APIs** for efficient data filtering and retrieval, reducing query response time by **30%**.

Breast Cancer Detector | *Demo* | *Source Code*

Technologies: *Python, TensorFlow, Streamlit*

- Built a machine learning model using a **Convolutional Neural Network (CNN)** for binary classification of breast cancer cases based on medical imaging data.
- Achieved **86%** accuracy on the test dataset, optimizing performance with limited computational resources.

Fare Payment System | *Demo* | *Source Code*

Technologies: *Dart, Flutter, Firebase, M-Pesa API*

- Pioneered the development of a mobile fintech application to streamline public transport payments, enabling seamless online ticket purchases and fare payments.
- Integrated **M-Pesa** for secure and efficient payment processing, reducing transaction time by **40%.**
- Implemented automated feedback systems for receipts, achieving **95%** real-time confirmation accuracy and reducing receipt delivery time by **70%**

Skills

Machine learning: TensorFlow, Scikit-Learn, Hugging Face Transformers, PyTorch, OpenCV
Programming: Python, Java, JavaScript, SQL, R
Database/Tools: PostgreSQL, Firebase, MongoDB