Lawrence Kimutai

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Address: P.O BOX 10100, 10100, 10100, Nairobi, Kenya (Work)

ABOUT ME

Accomplished Software Engineer with 5+ years of experience in geospatial data science, machine learning, and geospatial software development. Skilled in Python, JavaScript, R, and GIS tools such as Google Earth Engine, ArcGIS, and PostgreSQL. Successfully developed and contributed to numerous geospatial applications, enhancing agricultural mapping, land information management, and disaster preparedness. Collaborated with cross-functional teams on projects focused on addressing global challenges like food security and climate change. Demonstrated a strong track record of delivering high-quality solutions on time, with a proactive and results-driven approach.

WORK EXPERIENCE

01/09/2024 – CURRENT Nairobi, Kenya
SOFTWARE ENGINEER RAMANI GEOSYSTEMS

As a Software Engineer at Ramani Geosystems, I contribute to projects that integrate geospatial data with software development, optimizing system functionality and enhancing user experience. My key responsibilities include:

- **Development of County Land Information Management Systems (LIMS)**: Implementation of LIMS for Murang'a, Kajiado, and additional counties as required, ensuring the system meets each county's unique specifications for efficient land data management.
- **Machine Learning Model Development for Aerial Imagery Analysis**: Building and training machine learning and deep learning models to detect and classify sugarcane from aerial imagery, leveraging AI to improve the accuracy and efficiency of agricultural mapping processes.
- **LiDAR Data Visualization Software**: Currently developing software to facilitate the visualization and analysis of LiDAR data, providing users with enhanced capabilities for interpreting and utilizing high-resolution spatial data.
- **Additional Responsibilities**: Supporting various geospatial projects and collaborating with cross-functional teams to fulfill other software development tasks as assigned.

Business or Sector Professional, scientific and technical activities | **Department** I.T Department | **Email** info@ramani.co.ke

Website https://www.ramani.co.ke/

15/12/2021 – 16/06/2022 Nairobi, Kenya
GEOSPATIAL DEVELOPER INTERN KENYA SPACE AGENCY (IN COLLABORATION WITH DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY)

Project: Small-scale Crop Mapping using AI/ML

- Developed a Graphical User Interface (GUI) for crop-type mapping using machine learning and AI technologies integrated with Google Earth Engine and a PostgreSQL database. This tool was designed to meet Kenya Space Agency's goals in agricultural monitoring and food security.

Leveraged expertise in ML, geospatial analysis, web development, and database management to create an efficient, scalable solution for small-scale crop mapping, supporting data-driven decisions in food security.

Publication: Geospatial Solutions to Food Security: Small-scale Crop Mapping using AI/ML - A Case Study of Muringato

Business or Sector Education | **Department** IGGRES (Institute of Geomatics and Geospatial Research and Studies) | **Email** iggres@dkut.ac.ke

Website www.dkut.ac.ke

Link https://www.researchgate.net/publication/361885183_Geospatial_solutions_to_food_security_Small-scale_Crop_Mapping_using_AI_ML_A_Case_Study_of_Muringato

01/05/2022 – 01/05/2024 Nyeri, Kenya
RESEARCH ASSISTANT IN UNIVERSITY CENTRE FOR DATA SCIENCE AND ARTIFICIAL INTELLIGENCE (DSAIL - DEKUT)

Contributed to various projects that applied data science and AI skills to address real-world challenges. Key projects included:

- **Analysis of Water Level Correlation**: Conducted an analysis to correlate water levels with surrounding land use patterns, enhancing the understanding of how land use impacts hydrology.
- **Flood Risk Mapping Application**: Utilized sensor data from the river, which gauges water depth, to build predictive models assessing potential flood risks, providing valuable insights for disaster preparedness and management.

Business or Sector Education ｜ **Department** Centre For Data Science And Artificial Intelligence ｜ **Email** ciira.maina@dkut.ac.ke ｜

Website dekut-dsail.github.io/

DIGITAL SKILLS

Geospatial Data Science and AI / Machine Learning ｜ Python ｜ Web Development ｜ QGIS ｜ Geodjango ｜ Git ｜ PostgreSQL ｜ Java

Geospatial Data Science and AI / Machine Learning

Python, R Programming

Web Development

OpenLayers ｜ Vue.js ｜ React ｜ HTML ｜ mapbox ｜ JavaScript ｜ Leaflet

Geospatial Analysis and Remote Sensing Software

Google Earth Engine ｜ ArcGIS

Database Management

PostGIS ｜ GeoServer

EDUCATION AND TRAINING

01/05/2019 – 26/04/2024 Nairobi, Kenya
BACHELOR'S DEGREE IN GEOMATICS ENGINEERING, GEOSPATIAL INFORMATION SCIENCE (G.I.S) AND REMOTE SENSING Dedan Kimathi University of Technology

Website www.dkut.ac.ke ｜ **Level in EQF** EQF level 6

01/02/2015 – 20/10/2018 Iten, Kenya
KENYA CERTIFICATE OF SECONDARY EDUCATION (K.C.S.E) St. Patrick's High School, Iten

Website https://stpatricksiten.sc.ke/ ｜ **Level in EQF** EQF level 4

01/01/2005 – 21/10/2014 Eldoret, Kenya
KENYA CERTIFICATE OF PRIMARY EDUCATION (K.C.P.E) Kapkoros Primary School

Level in EQF EQF level 2

LANGUAGE SKILLS

Mother tongue(s):   **KISWAHILI**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C2	C2	C2	C2	C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

HOBBIES AND INTERESTS

Swimming

I enjoy swimming as a way to relax and stay fit. It's both a refreshing and enjoyable activity for me.

Traveling

I have a passion for traveling and discovering new cultures and places. It broadens my horizons and inspires my creativity.