

Jafftich Lanem, BSc. Geomatic Eng & GIS

Proposed Role: Software Developer



EXPERTISE

- Developing back-end software components, Extraction Transform Load (ETL) data pipelines and data migration scripts. Testing and debugging programs, writing unit and integration test cases.
- Acquisition and management of data. Software and metadata documentation, spatial analysis and data scraping.
- Tech Stack: Linux, Python, Docker, SQL, Django, Flask, Celery, Postgresql, Sqlite, Pandas, Geopandas, Numpy, Rasterio, Luigi, Matplotlib, Leaflet, Chartjs, Apache Superset, Scrapy, BeautifulSoup, Splinter, Selenium, AWS.

EDUCATION

- BSc. Geomatic Engineering & Geospatial Information Systems, Major, 2018

EXPERIENCE

6 years of experience as a Software developer, developing data management applications and ETL pipelines with a n history working as a GIS & Data resource Analyst

LANGUAGES

- English–Native
- Kiswahili–Proficient
- Kalenjin- Proficient

Present Position

Software Developer, American Institutes for Research (AIR) (2020–Present)

Lanem Jafftich is a software developer working on the FEWS NET 7 project at American Institutes for Research (AIR). He is a skilled python developer, with demonstrated experience in developing back-end components to improve functionalities and overall performance of software systems such as Fewsnets Data Warehouse. He spearheads testing & debugging programs including fixing any reported bugs and writing effective test cases such as unit tests to ensure the software meets design requirements.

He has extensive experience in the development of back-end software development, Extraction Transform Load (ETL) data pipelines, data migration scripts, spatial analysis, and visualization. He is proficient in Python and Django for back-end development and has worked with Luigi to develop reusable and sustainable data pipelines.

Previously, Mr Lanem played a crucial role at Data Engineering and Acquisition Team in Kimetrica, which focused on developing highly curated data sources, tools and technologies that help ingest data sets from various sources and standardize them for usage across different projects such as DARPA World Modelers Program and training of Method for Extremely Rapid Observation of Nutrition status (MERON) project.

Lanem holds a Bachelor of Science in Geomatic Engineering and Geospatial Information System degree from Dedan Kimathi University of Technology, Kenya.

Selected Professional Experience

GIS & Data Resource Analyst, Kimetrica LLC, (2019-2020)

Mr. Lanem served as GIS and data resource analyst at Kimetrica's Data Engineering and Acquisition Team, which focused on developing highly curated data sources, tools and technologies that help ingest data sets from various sources and standardize them for usage across different projects. Lanem roles included developing extract, transform and load (ETL) pipelines using a combination of open-source technologies including the Luigi workflow engine and Pandas for data manipulation. He also supported the Applied science team on researching new data sources, data cleaning, and warehousing. Developing, improvement and maintenance of Kimetrica Data Warehouse (KDW). Writing scrapers and crawlers to fetch web based open-source data sets and ingest to KDW.

He was responsible for researching required data sources, data cleaning, and warehousing. Support the Data Lab team in development and maintenance of price, economic, health, nutrition, freight, crop production, demographics, conflict, and accessibility data sets. He also played a key role in the development of ontology, unit tests, and maintenance of CKAN data publishing platform. Has worked on the Defense Advanced Research Projects Agency (DARPA) World Modelers Program and Method for Extremely Rapid Observation of Nutrition status (MERON) project.

Modeling data engineering - DARPA project: Lead data engineering for market price model, logistic model, Malnutrition model and Accessibility model. This included involved data extraction, data transformation to required format and loading to data warehouse.

Method for Extremely Rapid Observation of Nutrition status (MERON): Mr Lanem lead reorganization, indexing, and verification of survey data that were used to train MERON. This involved selection of correctly taken photographs and matching with their corresponding SAM and GAM values computed from nutrition surveys.

GIS Consultant, Kimetrica LTD (2018–2019)

Worked on *DARPA project* where his responsibilities included data acquisition and maintenance of core data layers and metadata development of all data libraries. Developing data scraping pipelines to update monthly price changes. Developing of organizations ontology for content management in intervention modeling. Writing unit tests for hydrology models. Collection of crop production statistics. Assisted in extracting the current climatic conditions based on remotely sensed data. And supporting data digitization and collection of hard-to-find data sets.

GIS Intern, Kimetrica LTD (2018)

Assisted in digitization of road networks, health facilities, airports, river ports and markets for accessibility modeling. Collection and aggregation of malnutrition survey results in East Africa

for malnutrition model. Conducted data collection and cleaning for market price data, Maintained core spatial layers such as administrative boundary shapes.

GIS Consultant, Skypark Limited, Kenya (2017)

While working at Skypark, Mr Lanem played a key role in developing integrated spatial development plans for Bomet and Narok, mapping of household access to pit latrines for the Red Cross in Bomet county. He also led environmental impact assessment of effects of water abstraction along the Kipchorian River in Kericho county. At Skypark he oversaw data collection, analysis, and preparation of map products.

Land Survey Intern, Ministry of Lands and Urban Planning, Kenya (2017)

Worked in surveying, mapping and registry departments with the following responsibilities: land subdivision, mapping and creating urban plans, property surveying and maintenance of the land registration system.

Employment History

- 2020–Present** Software Developer, American Institutes for Research
- 2019-2020** GIS & Data Resource Analyst, AIR/Kimetrica LLC
- 2018-2019** GIS Consultant, Kimetrica LTD
- 2018** GIS Intern, Kimetrica LTD
- 2017** GIS Consultant, Skypark Limited, Kenya
- 2017** Land Survey Intern, Ministry of Lands and Urban Planning, Kenya

Country Experience

Kenya