

Collins Asega Amadala

Nairobi, address 79534-00200|cell +254727597610 |Email Collinsasega.ca@gmail.com | [Linkedin](#)
<https://www.linkedin.com/in/collins-asega-724022150/> Github <https://github.com/Transega>

Earth Science and Spatial analyst

Earth science specialist with experience in Geospatial modeling, Hydrology and application of Geospatial techniques in the broad fields of natural sciences, Humanitarian affairs and commercial enterprises. Skilled at Creation of visually compelling maps, web maps, finding suitable location using methods such as interpolation. Manage source and disseminate geospatial data and pre-processing and post processing of the same. Recognized for strong analytical skills and application on Geo-information in various fields such as Hydrology, planning, Environment, Water Quality and Pollution Control, and in Business. I am keen to details, organized and possess excellent communication skills

CORE COMPETENCIES

Web mapping |OGC framework|Django|Vue Js|Joomla|Laravel| Automation using Python | Site Suitability analysis |Data Collection using Open Data Kit (ODK)| Data analysis and Visualization using python, power BI and Tableau|| Trainer of Trainers |Data acquisition and compilation from institutions & Earth observation| Databases (mysql, SQL, Spreadsheets)|Machine learning| Research and development of approach to tackle problems | Software (QGIS, ArcGIS, ERDAS, SNAP, HecRass, Hec Hms, Hec Ressim, Impact tool box and ENVI) | Data conversion | Detailed Oriented | Portability of skills in multiplatform applications | Metadata creation and editing | Google Earth engine | Interpretation of Water Quality data|

CAREER ACHIEVEMENTS

- Developed Scripts for Forest canopy Density Mapping.
- Developed Scripts for Development of Geoportal for Tropical Forest Monitoring and Assessment Information System.
- Developed scripts for development of wetland monitoring information system products
- Developed Repository for Collection and Classification of Sentinel two Images for Assessment of impact of Desert locust.
- Assisted in the development of a Methodology to Asses the impact of Desert Locusts in Kenya Using Earth Observation and Drone Imagery
- Developed an approach that uses Radar images to quantify Damage caused to vegetation by desert locust.
- Visualization of Areas affected by Desert Locust Using Static and web maps as well as charts.
- Drafted a Section on Phytoremediation for the publication on: Estimating the relative importance of environmental, anthropogenic and social factors in influencing water quality in the Bumbu Watershed, Lae, Morobe Province, Papua New Guinea.
- Created a spatial data inventory for High resolution satellite image.
- Modelled Storm water for HEP
- Implemented a Python Script to Unzip and sort Raster Images.
- Utilized radar remote sensing together with google earth engine to perform forest mapping as estimate vegetation loss
- Performed and documented Abstraction and pollution survey in Migori and its environs.
- Collected and analyzed base line data for the construction of the Kenya marine school in Kisumu.

- Analyzed environmental impact assessment reports for various projects in the western region.
- Supervised drilling boreholes in Moiben and Eldoret.

PROFESSIONAL EXPERIENCE

Data & applied analyst | Pula 01/10/2021 – current

- Working with field data to Monitor crops using Earth observation data
- Using vegetation indices to asses crop phenology and understand vegetation health across growing season
- Working with team to develop strategy that would avail near real time analysis of farming areas using Earth observation
- Development of custom scripts to analyze remote sensing data for use in Web application called Skyfall

Geospatial Information Technology technician | LocateIT 22/03/2021 – 30-09-2021

Engaged on various projects:

- Tropical forest Monitoring Using Earth Observation
- Wetland Monitoring information system
- Monitoring Integrated system for Land Degradation

Junior Machine Learning Engineer | Omdena 27/10/2020 – 17/01/2021

Worked on a project aimed at assessing the impact of Desert locust in Kenya using Machine learning and artificial intelligence. The datasets involved are sentinel 1 and 2 and drone imagery for fine resolution.

- Collaborated in building Machine learning models to classify images.
- Developed an Approach for Damage assessment using Radar (Sentinel 1) Images
- Searched and developed algorithms to implement the project.
- Classification of images using computer vision to detect land use land cover.
- Collaboration with others to ensure success of the project.

Support for Water Quality Review| Morobe Foundation 21/09/2020-11/06/2020

Worked on the review of a scientific paper that was seeking to establish the Water quality aspects;

- I Reviewed the report and suggested changes in some methodologies
- Wrote a section on Phytoremediation as a technique for catchment regeneration
- Gave out recommendations on way forward
- Analyzed spatial distribution of variables such as Household Health, Community health Land use land cover

Global Intern |Hash Analytics 17/09/2020-20/10/2020

Worked as a Global intern mostly focused on data science key roles include;

- Analysis of Data using python framework of Pandas and Numpy.
- Data analysis using Tableau
- Machine learning and created a project on Employee attrition
- Google analytics

GIS analyst volunteer | International center for Humanitarian affairs (at Kenya Redcross) 9/06/2020-01/10/2020

- Mapping covid-19 response using drone imagery
- Validated flood events for six counties.
- Added Level III spatial administration level for the flood events.
- Added new flooding events that were missing in the database.

Spatial data analyst Intern | Regional Center for mapping of Resources for Development 11/09/2019 – 01/03/2020

- Acquired and disseminated Spatial data for Internal use and for Clients.
- I prepared and printed maps.

- Got trained on using multiapplication platforms (Google earth engine, Flash flood modelling, Impact tool box)
- Undertook Mapping of Landslides and floods using radar for west Pokot county
- Customer service mainly concerning data request, visits by professionals as well as learners and general requisitions on geo-information.
- Assisted in monitoring of the Modis receiving station at the facility.
- Undertook water quality mapping and catchment delineation using DEM

Census Enumerator | Kenya National Bureau of Statistics

14/08/2019-31/08/2019

- Identification of Enumeration Areas.
- Familiarization and marking of households (knowing the name of the household head, dwellers and mapping the Structures)
- Actual enumeration of people and submission of the data frequently.

Hydrology Intern | Water Resources Authority Lake Victoria Basin (Kisumu Region office) 6/05/2019-31/07/2019

- Created Maps showing Major Abstractors and major effluent emitters within the Catchment.
- Assisted in the development of effluent discharge compliance plan for sugar industries in Kisii and migori.
- Utilized ODK to collect information during Surveys to identify Water abstraction points and Emission and updated this information in the Database.
- Conducted an abstraction and pollution survey.
- Conducted Environmental and social impact assessment reports for various projects.
- Monitored water resource user's association activities, provided technical assistance and training regarding spring protection.
- Assisted in interpretation of water quality reports with their related certificates.
- Assisted in development of Water quality monitoring programs
- In-situ measurements and collection of samples for Water quality.
- Engaged with stakeholders on the Issue of EDCP and need to adhere to acceptable effluent standards •
- Review of applications of effluent discharge and also involved in the Lake Victoria Water Hyacinth program
- I updated the borehole Completion record registry.
- Conducted water quality analysis for portable and waste water.
- Conducted discharge flow measurements for various streams and rivers.
- Preparation of quarterly and annual reports for the sections attached and water situation reports for the water quality section.

EDUCATION, TRAINING & CERTIFICATIONS

Bachelor of science Earth Science with IT, Hydrology and water resources management

Maseno University, Kenya

Dec 2019

Certificate in Introduction to Radar remote sensing

Earth Observation college

April 2020

Ensemble framework for Flash floods Monitoring Servir Nasa

November 2019

Quality management system training on ISO 9001:2015

Water resources Authority

May 2019

Wastewater Treatment

Hydroaid

September 2020

**Using Earth Observations to Monitor Water Budgets for
River Basin Management II**

ARSET NASA

August 2020

Programming for Geospatial Hydrological applications

UNESCO

May 2021

Mr Eric Ng'ang'a
Geospatial analyst - RCMRD
072 4270732
Email: Inganga@rcmrd.org
Fanuel Onyango
Water Quality & pollution Control- WRA
0720 128503
Email: onyangofanuel2016@gmail.com
Dr. Dennis Masika
Lecturer at Maseno University
0725 209757