

Benard Onyango

Geo-spatial Engineer

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Summary

Experienced Geographic Information Systems and Remote Sensing Specialist with a demonstrated history of working in the international affairs industry. Skilled in Google Earth Engine, QGIS, ArcGIS, Python-Django, Geonode, R, JavaScript, GeoServer, PostGIS. Strong information technology professional currently pursuing a PhD in Information Systems at the University of Nairobi. Has over one year experience in managing GIS projects.

Skills

- Machine and deep learning algorithms
 - ArcGIS, QGIS, ENVI, ERDAS
 - JavaScript, Python, Django framework, OpenLayers
 - Geonode, PostgreSQL/POSTGIS, GeoServer, Google Earth Engine
 - Linux and Git for code version control
 - Ms Office, Adobe Illustrator
 - Project Management
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Work Experience

GIS Developer

Food and Agriculture Organization of the United Nations (FAO) | August 2020 - Present

1. Contribute to the development of Geonode, a SWALIM Geospatial online web portal.
2. Maintain and support data publication in Geonode with the help of GIS/RS team to ensure all datasets are updated and well documented.
3. Assist in development of GIS web applications and geoprocessing tools
4. Provide maintenance and support of the Database and Geospatial Servers
5. Assist in quality assurance checks on SWALIM'S GIS Web based systems and recommend updates or new techniques when applicable.
6. Assist in satellite images pre-processing & mosaicking in preparation for image interpretation and their regular update.

7. Develop tools to automate processing of remote sensing data including image classification, support onscreen digitization, extraction of features and generation of tabular information to support SWALIM and other FAO Somalia sectors.
8. Assist in producing scripts for image processing & analysis through Google Earth Engine and other web based geospatial platforms.
9. Develop tools for geospatial data analysis using open source software including QGIS.
10. Design and implement data work-flow processes for web applications.
11. Document and develop user manuals for all GIS/RS applications developed

GIS/ RS Assistant

Food and Agriculture Organization of the United Nations (FAO) | August 2019 - July 2020

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Database Administrator

Lunar Arch Limited | February 2018 - July 2019

1. Performed quality checks on the data produced by my colleagues. Managed a group of 20+ people.
2. Assisted in publishing and maintaining layers in GeoServer
3. Managed all the data sets in PostGIS
4. Created triggers in PostGIS to automatically back up data
5. Monitored the database by proactively resolving database issues and maintaining it
6. Set up and controlled user profiles and access levels for each database segment to protect important data

GIS Technician

Kenya National Bureau of Statistics | December 2017 - February 2018

I was mainly involved in the creation of Enumeration Area (EA) maps in preparation for the 2019 census

GIS/RS Specialist

Kenya Agricultural & Livestock Research Organization | September 2016 - July 2017

1. Performing crop suitability analysis using QGIS and R
2. Creating Digital Soil Maps (DSM) using R
3. Creating a web mapping manual to assist colleagues understand the basic concepts of web mapping

GIS/RS Specialist

Collaborative Crop Research Program (CCRP) May 2016 - August 2016

1. I was the head of GIS department
2. Collect farm data from farmers using ODK
3. Train research team members on open source GIS software
4. Provide oversight and guidance to ensure creation of high-quality maps for each of the surveyed communities

GIS Intern

Kenya Agricultural & Livestock Research Organization | June 2015 - August 2015

1. Trained on the use of Opensource software (QGIS and PostGIS)
2. Designing soil geodatabase
3. Carrying out crop suitability analysis

Academic History

University of Nairobi

PhD in Information Systems | September 2020 - Present

University of Nairobi

Masters in Geographic Information Systems (GIS) | September 2017 - September 2019

1. Thesis title: "Towards Performance Improving Techniques of Web Based GIS: An Empirical Case Study of An NSDI Prototype Portal"
2. Recipient of University of Nairobi Scholarship
3. Gave back to the University by teaching third year undergraduate students R programming.

University of Nairobi

Bsc in Geospatial Engineering | September 2011 - September 2016

1. Project Title: Developing A Web Based GIS Application For Residential Real Estate Transactions. Case Study: Nairobi County
2. Graduated with Upper Second-Class Honors

Maseno School

Kenya Certificate of Secondary Education (KCSE) | February 2006 - November 2009

Graduated with a mean grade of A minus (A-)

Accomplishments

1. Produced tutorials on GIS, programming, Google Earth Engine, PostGIS and GeoServer on my website and YouTube channel (See Additional Information section for links). These tutorials have been received positively in the online community based on the viewership and comments on the tutorials
2. Managed to give back to my University by teaching my Masters classmates on Web Mapping and third year undergraduate students on R programming (Dr.Onchaga and Prof. Karanja in the reference section).
3. Collaborated with a group of students during my undergraduate studies to build a web application for reporting crime in Nairobi County (See Work on GitHub below for the details about the code)
4. While working at Lunar Arch Limited, I managed to come up with scripts to automate repetitive tasks such as publishing of layers in GeoServer.

Affiliations

Graduate Member, Institution of Surveyors of Kenya (ISK), 2016 to Current

Additional Information

Personal Website

link: <http://benardonyango.com>

Description: I share GIS, Web Mapping and Remote Sensing content

YouTube Channel

link: <http://www.youtube.com/c/BenardRodgersOnyango>

Description: I share GIS, Web Mapping and Remote Sensing content

Work on GitHub

crime mapping

link: <https://github.com/benardonyango/crimemapping>

Description: A web application built using PostGIS, GeoServer and OpenLayers that enables users to visualize crime data on a map and also report crime by clicking on a map the location of crime and give more details about the crime.

Residential real estate web portal

link: <https://github.com/benardonyango/Web-Based-GISforResidential-Real-Estate>

Description: This is a web portal created using Django python framework. It allows users to sell houses by specifying the location of the house on a map and inputting more details about the house. Additionally, users can search for a house on sale or rent and make an informed decision based on other information such as levels of crime, nearby amenities which have been provided as layers in the application.

Spatial Data Infrastructure

link: https://github.com/benardonyango/custom_SDI

Description: A web portal created using geonode in order to share geospatial data.

PDF Tutorial on basics of PostgreSQL/PostGIS, GeoServer and OpenLayers

<https://drive.google.com/drive/u/0/folders/0BwXPSCchwrl5NWkl2Yjkxa0htM2M>

Websites for my clients

languages used: HTML, CSS, PHP, Bootstrap, JavaScript, Django

links: <http://benardonyango.com/layouts/portfolio/>

Languages

English, Swahili, Luo

Interests

Research

GIS, Web mapping, Scripting

Guitar, Piano, Violin

Referees

Dr. Kennedy Were

Research Scientist

Kenya Agricultural and Livestock Research Organization

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Email: kenwerez@yahoo.com

P.O. Box 14733-00800, NAIROBI.

Zachariah Mbasu

Founder, African Maths Initiative

Supervised the work at Collaborative Crop Research Program

Telephone: +254 722 124 199

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P.O.Box 3429-40100, KISUMU

Prof. Faith Karanja

Head of Department, Geospatial Engineering

University of Nairobi

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Email: faithkaranja@uonbi.ac.ke

P.O.BOX 30197-00100, NAIROBI

Dr. Onchaga

Lecturer Technical University of Kenya

Email: onchagamoses@gmail.com

Thomas Muteti

System Administrator, Lunar Arch Limited

Email: thomas.muteti@gmail.com