

# Joseph Gyegyiri

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## EDUCATION

<b>Master of Science (M.S.) - Civil Engineering</b> (Transportation/Geomatics Concentration) <i>Florida Atlantic University, Boca Raton, Florida</i>	Jan 2023 - May 2024 (Expected) GPA: 4.0 / 4.0
<b>Bachelor of Science (B.S.) - Geomatics Engineering</b> <i>Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.</i>	Sep 2016 - Aug 2020 GPA: 3.65/4.0

## EXPERIENCE

### Graduate Research Assistant

Florida Atlantic University, Boca Raton, Florida	Jan 2023 – Present
<ul style="list-style-type: none"><li>● Incorporated GIS technology with hydrologic modeling to predict potential flood areas based on storm events across Florida.</li><li>● Created high quality maps and conducted geospatial research for the CENTER FOR WATER RESILIENCY AND RISK REDUCTION</li><li>● Processed LiDAR-derived topographical data, employed regression analysis to model groundwater behavior, conducted multispectral image classification to identify impervious surfaces, computed soil storage capacities, and effectively utilized Arc Hydro for drainage routing and infrastructure integration within ArcGIS Pro.</li><li>● Generated an in-depth flood risk report along with accompanying appendices to present the project's findings comprehensively.</li></ul>	

### Surveyor

Denys Engineers, Accra, Ghana	Nov 2022 – Jan 2023
<ul style="list-style-type: none"><li>● Produced a Digital Elevation Model (DEM) for underground pipe installation utilizing drone technology and GPS data.</li><li>● Designed road alignments and profile utilizing GPS technology data and AutoCAD.</li><li>● Established Ground Control Points (GCPs) for all survey activities conducted on-site.</li></ul>	

### Graduate Mine Surveyor

AngloGold Ashanti Iduapriem Limited, Tarkwa, Ghana	Sep 2020 – Aug 2021
<ul style="list-style-type: none"><li>● Revised excavation plans and employed Surpac and Datamine software to design ramp, compute the extracted material volume from mining operations and update pit design.</li><li>● Performed ore mark-out, drilling holes design and mark-out, boundary and farm demarcation.</li><li>● Used UAV to comprehensively document engineering projects both within and outside the company.</li><li>● Collaborated with diverse departments to expand my understanding of various mining operations.</li></ul>	

## SKILLS

<b>Programming:</b>	Python, R, SQL (PostgreSQL), MATLAB.
<b>GIS Software/Web:</b>	ArcGIS Pro, ArcGIS 9.3-10.7, ArcGIS Online, QGIS, Leaflet, PostGIS, ArcGIS Experience Builder & Dashboard.
<b>Remote Sensing Software:</b>	ENVI, ERDAS IMAGINE, PCI Geomatica, Google Earth Engine
<b>AI &amp; Analytics:</b>	Data analysis & visualization, machine learning & deep learning (Image Classification), Statistical analysis.
<b>Data Collection:</b>	Total Station, levelling instrument, all GPS types, UAV, Laser scanners.
<b>Data Processing:</b>	Autodesk Civil 3d, Pix4d mapper, Surpac, Trimble business center, Microsoft Word, Excel, PowerPoint.
<b>Human Relations:</b>	Good Communication & organizational skills, Team Work, Multi-tasking, strong analytical and conceptual thinking.

## PROJECTS

<b>Storm Watershed Master Plan Project (ArcGIS Story Map)</b> – <a href="#">Click here to access the app.</a>
<ul style="list-style-type: none"><li>● Developed an ArcGIS story map showing the progress of my graduate research duties at the Center for Water Resiliency and Risk Reduction at Florida Atlantic University.</li></ul>
<b>Automatic Satellite Image Segmentation App</b> – <a href="#">Click here to access the app.</a>
<ul style="list-style-type: none"><li>● Developed a satellite image segmentation app using U-Net to train the Dubai datasets. The app can segment images into 6 classes: buildings, land, roads, vegetation, water, and unlabeled. The app is hosted on Hugging Face with Gradio, making it easy to use and share.</li></ul>

## PUBLICATIONS & PRESENTATIONS

**Presentation: Using deep learning to automatically detect building damage from high resolution remotely sensed images.** Presented my work at the South Florida GIS Expo (August 2023). [Details here](#)

## AWARDS & HONORS

**United States Geospatial Intelligence Foundation Scholarship.**  
Leidos Scholarship for AI/ML Advancement (2023-2024 cohort). [Details here](#)

## EXTRA CURRICULAR ACTIVITIES

<b>Vice President</b> American Water Work Association, FAU student chapter	Sep 2023 – Present
<b>Volunteering with Open Street Humanitarian Mapping team in Ghana</b>	Jan 2022 - Present

### Professional Membership

- USGIF - ESRI YPN - ITE (student member) – FSMS (student member) - AWWA