

Youssef Housien Ahmed

Teaching Assistant

Geomatics Engineer

🏠 Cairo, Egypt

👤 Marital Status: Single.

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🌍 Nationality: Egyptian

▼ Summary

Teaching Assistant & Geomatics Engineer with a strong academic and practical background in Geomatics Engineering. My expertise includes GIS, Remote sensing, photogrammetry, Geo-AI, Geodesy, GNSS, LiDAR, Drone UAV, Hydrographic surveying, Underground surveying, and Cartography. I am passionate about integrating innovative geospatial technologies into both education and real-world applications.

▼ Education

2019 - 2024	Bachelor of Surveying Engineering, Geomatics Engineering Department, Faculty of Engineering at Shoubra, Benha University. Cumulative Rank: Second Grade: Very good with honors The best graduation project at the Geomatics Engineering Department.
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▼ Experience

2024 – 2025 Future Of Egypt for Sustainable Development Agency at this time, I was completing my military service	GIS and Remote sensing Specialist <ul style="list-style-type: none">Working in Enterprise Environment SQL server or local file Geodatabase.QC (Topology rules and other tools) to ensure geometry accuracyQA (Domain – subtype – attribute rules)Using most spatial analyst tools (spatial join – intersect ...)Converting different data formats to Geodatabase (CAD to GDB...)Map production, Cartography, 3D VisualizationGeo-Apps creation (Dashboard – Story map)NDVI & SAVI & NDWI on (Landsat – Sentinel) satellite imageryCreating Mosaic raster data - Mosaic datasets – Multidimensional dataRaster analysis tools Technical office engineer <ul style="list-style-type: none">GNSS data Processing, and enhancement positioning accuracyCut & Fill computation & Geometric design highway(Cadastral - Grid – Contour - Topographic) map production.Traverse adjustment & Loop leveling adjustment
July– Oct 2024	Surveying engineer <ul style="list-style-type: none">Field work procedures by LiDAR system (Terrestrial Laser Scanner)LiDAR Data processing & registration & export point cloudGNSS procedures for As-Built land surveying and construction Stake-out.

▼ Technical Skills

Software		Instruments
ArcGIS Pro QGIS	Trimble Business Center	Laser scanner (Terrestrial)
Erdas Imagine Envi	Leica Geo Office	FARO Leica P30
AutoCAD Civil 3D	ArcGIS Drone2Map	DJI Drone Mavic 3
Surfer Global Mapper	Pix4Dmapper DJI	GNSS Receivers
Google Earth Pro	Cyclone REGISTER 360	Echo-Sounder
MATLAB	FARO SCENE	Total Station Level

Programming Front-End	Spatial Databases	Geospatial Web Services
HTML CSS	PostgreSQL	GeoServer
Python (Arcpy)	PostGIS	

▼ Online Courses

University of Toronto	Introduction to GIS Mapping (Oct 7, 2022) https://coursera.org/share/acf7246104fe6ed5ab9e5836d4bac81a
Esri	11 Completed web courses and MOOCs <ul style="list-style-type: none"> ▪ Going Places with Spatial Analysis (March 18, 2025) ▪ GIS for Climate Action (April 4, 2025) ▪ Make an Impact with Modern Geo Apps ▪ Cartography (October 10, 2025) ▪ ArcGIS Drone2Map Basics (May 12, 2025) ▪ ArcGIS Drone2Map: Processing Imagery (May 16, 2025) ▪ Working with NetCDF Data in ArcGIS Pro (October 14, 2025)

▼ Field Training

10 June 2024	Hydrographic Surveying at Hydraulic research institute (Echo-Sounder)
(29 Jan– 14 Feb) 2024	The National Research Institute of Astronomy and Geophysics (Gravimeter)
(15 July– 30 July) 2023	GNSS Positioning Techniques at Zenith company (Static – RTK - PPK)
2021 and 2022	Bridge construction at Arab Contractors Company

▼ Soft Skills

Willingness to learn, Problem Solving, Teamwork, Work under pressure.

▼ Languages

Arabic: Mother Tongue.

English: Good

▼ Projects



Graduation Project
Geomatics Engineering Department



<p>Remote sensing</p>	<ul style="list-style-type: none"> • Satellite image Processing to impact spatial Analysis of the Daniel Storm on the Derna city in Libya. • Deep Learning Object Detection on satellite images to Tracking the Increasing of Oil Palms using • Generate Point cloud by LiDAR Laser Scanner
<p>Geographical Information Systems</p>	<ul style="list-style-type: none"> • Creating interactive map Dashboard to visualize the analysis of illiteracy rate and population in Egypt's governorates and villages in 2023. • Creating Story Map to Comparison between types of Islamic architecture, Cairo, Egypt. • Creating Noise Map to determine and represent the noise level and its relationship with traffic at Shoubra. • 3D Modelling and Visualization of building at NRIAG
<p>Geodesy</p>	<ul style="list-style-type: none"> • Geodetic Network Establishment by Static technique • Precise point positioning Solution (PPP) • Relative positioning With IGS Station • Assessment of Point Positioning Using Code Observations from Smart Phones. • Establishment of local geoid model
<p>Surveying Applications at NRIAG</p> 	<ul style="list-style-type: none"> • Creating (Cadastral, Topographic, Contour) Maps • Traverse Observations and adjustment. • Longitudinal loop leveling to Determine Orthometric heights for GNSS stations based on MLS. • Highway geometric design
<p>Hydrographic Surveying at HRI</p> 	<ul style="list-style-type: none"> • Single beam Echo-Sounder with RTK GNSS to determine depths Nile River. (Filed work) • Filtering, Processing, Analysis and 3D visualization of these collected data • Using GIS tools to generate Digital elevation model



Egyptian Space Agency

Satellite image processing for Generation Digital Elevation Model (DEM) from InSAR data based on free sources SAR data to decrease the cost and time of field measurements