

# Abdelrahman Hossam Embaby

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## **Professional Summary**

GIS Developer with expertise in spatial data analysis, satellite imagery processing, and web GIS applications. Proficient in ArcGIS Pro, ERDAS IMAGINE, and Python-based geospatial tools. Experienced in developing scalable GIS solutions using FastAPI and interactive web maps with Leaflet.js. Skilled in building intelligent GIS chatbots with text analysis capabilities. Quick learner passionate about leveraging AI and geospatial technologies for innovative solutions.

## **Education**

Bachelor's in Geomatics – Ain Shams University, 2025

## **Technical Skills**

GIS Software: ArcGIS Pro, ERDAS IMAGINE, AutoCAD, ArcMap

Programming: Python, JavaScript, HTML, CSS

Python Libraries: rasterio, GDAL, xarray, geopandas, scikit-image, PyTorch, Pandas, NumPy, matplotlib, FastAPI

Web GIS: API Integration, GeoJSON, Leaflet.js

Text Analysis: compromise, Fuse.js, LangChain

Data Analysis: Geospatial data processing, NDVI/NDWI analysis, Deep Learning for satellite imagery

## **Work Experience**

GIS Intern – Geomakani (Training)

Conducted spatial data analysis and developed GIS tools using ArcGIS Pro and Python for automation.

Improved workflow efficiency and data processing.

Surveying Intern – Arab Contractors (Training)

Assisted in land surveying projects and processed geospatial data.

Worked with Level and Total Station.

## **Projects & Achievements**

Simba – GIS Platform Developer

Developed an integrated GIS platform for satellite imagery analysis and geospatial data management.

Built interactive web maps with Leaflet.js and dynamic UI features like "Favorites".

Integrated an AI-powered GIS chatbot (DeepSeek via Ollama) for smart user query responses.

Applied Python libraries (rasterio, GDAL, xarray, geopandas, matplotlib) for NDVI and NDWI analysis.

Awarded 1st place in the Arathon 2 competition for graduation projects, Faculty of Arts, Ain Shams University, with a certificate of recognition.

Delivered a lecture on GEO AI at the Egyptian Geographical Society and received a certificate of participation.

## **Certifications**

Natural Language Processing (NLP) Specialization, Coursera

Getting Started with GIS, Esri

Spatial Analysis and Satellite Imagery in a GIS, University of Toronto, Coursera

Introduction to Remote Sensing, geo.university

Python for Everyone, Esri

## **Languages**

Arabic: Native

English: Intermediate