Abdelrahman Diaa

GeoAI Engineer | Data Scientist | GIS Specialist

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SUMMARY

Driven GIS and GeoAI Specialist currently completing a degree in Surveying & Mapping. Passionate about bridging the gap between Remote Sensing and Machine Learning to drive data-driven spatial decisions. Proven ability to execute end-to-end spatial analysis, develop innovative GIS solutions, and lead technical projects. Eager to bring strong analytical expertise in Python, Spatial Analysis, and AI to a forward-thinking enterprise environment.

EDUCATION

Cairo University — Giza, Egypt
*Bachelor of Arts in Geography, Major in **GIS & Remote Sensing*** — *Sep. 2023 – Exp. June 2027*
- Focus: Spatial Analysis, Photogrammetry, Remote Sensing Physics, Mathematics for Surveying.

PROJECTS

Forest Fire Risk Analysis | *Spatial Analysis, Remote Sensing* — Montesinho Park, Portugal
- Leveraged **Spatial Analysis** on 500+ wildfire records to map high-risk zones using geographic coordinates.
- Applied statistical distribution analysis to identify extreme fire events driving **80%** of ecological damage.
- Segmented the park into 3 risk categories based on Drought Code indicators, aligning with **Environmental Monitoring**.

Australian Flight Reliability Analysis | *Python, Pandas, Seaborn* — Remote
- Engineered a data pipeline using **Python & Pandas** to analyze historical flight data and operational bottlenecks.
- Identified the "Winter Crunch" seasonality trend, recommending a **15% operational buffer** for Q2/Q3.
- Visualized route-specific disruption heatmaps using **Seaborn**, comparing carrier performance.

Heart Disease Statistical Investigation | *Inferential Statistics, T-Test* — Medical Research
- Conducted Hypothesis Testing (T-Test) on 1,025 clinical records to validate markers with **99.9% confidence**.
- Refuted the Null Hypothesis regarding Max Heart Rate variance, proving statistical significance.

CERTIFICATIONS

IBM Data Analyst Specialization – IBM	Dec. 2025
Geographic Information Systems (GIS) Specialization – UC Davis	Dec. 2024
Learn SQL Basics for Data Science Specialization – UC Davis	May. 2025
Data Visualization with Tableau Specialization – UC Davis	Sep. 2024

TECHNICAL SKILLS & LANGUAGES

Languages: **English C2 Proficient** (EF SET Certificate), Arabic (Native), German (Beginner)
GeoAI & GIS: ArcGIS Pro, Remote Sensing, Spatial Analysis, Google Earth Engine, LiDAR Concepts
Data Science: Python (Pandas, NumPy), SQL, Data Visualization, Business Intelligence
Tools: Tableau, Excel, VS Code, Git/GitHub, Jupyter Notebook

ACTIVITIES & LEADERSHIP

Founder of VEXL Startup | *GIS & GeoAI Solutions* — Cairo, Egypt
- Leading a specialized startup focusing on Geographic Information Systems, Remote Sensing, and GeoAI.
- Developing innovative solutions for spatial data analysis and environmental monitoring.

Competitive Finswimming | *National Athlete* — Giza, Egypt
- Professional Finswimmer for **8 years**, demonstrating exceptional discipline and resilience.
- Ranked **23rd** in the Republic Championship (National Level), competing among elite athletes.