Mostafa Essam Alsayed

GIS Project Manager
Geospatial Solutions Expert
GIS/Remote Sensing Sr. Analyst / DB Analyst
GIS/RS Technical Instructor

Summary

I am a passionate and innovative GISer with over 16 years of experience in the information systems industry, I've worked in multiple companies, with multiple stakeholders & nationalities, where I could define appropriate applications through all GIS platforms such as ESRI Products, Hexagon Products, and Opensource.

Familiar with Database servers, developing enterprise database, and Web/Desktop applications. I've Designed geospatial solutions, including data analysis processes, data models, workflows, and integration points.

Collaborate with various government and business entities in the Enterprise and infrastructure projects, within my work experience I've been developing strategies for utilizing GIS and Remote sensing technologies to improve business operations.

Also, I've Good experience in software projects management, improving team production, extensive experience in managing Enterprise GIS projects implementing Hybrid and Agile Methodologies.

I also have a wide experience in technical training among many onsite/online platforms.

Contact Info

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YouTube: Youtube/@Eng.mostafaEssam

Languages

Arabic: Native

English: Fluent

Experience Record *"Experience Details is attached"*

- **Geospatial solutions Expert** at **Sets international,** Riyadh-KSA
  Jan 2024 ~ Now

- **Technical Project Manager** at **ABM Al-Olaian Group**, Riyadh-KSA
  Sep 2023 ~ Jan 2024

- **GIS Project Manager** at **Spectrum for inf. systems,** Cairo-Egypt
  Apr 2023 ~ Sep 2023

- **GIS Business Analyst/ GIS Analyst** at **Ras Al-Khaimah Municipality,** R./Hybrid
  Jan 2022 ~ Apr 2023

- **Technical Training Dep. Manager** at **Edge-pro for inf. Systems,** Cairo-Egypt
  Jan 2021~ Dec 2021

- **GIS Dev. Team Leader** at **Military surveying Auth. Armed Forces,** Cairo-Egypt
  Mar 2020 ~ Jan 2021

- **Database Design/Admin** at **Military surveying Auth. Armed Forces,** Cairo-Egypt
  Mar 2020 ~ Jan 2021

- **Remote Sensing Technical Instructor** at **ITI "inf. technology institute",** Cairo-Egypt
  Sep 2019 ~ Sep 2024

- **GIS/RS Senior Analyst** at **Edge-pro for inf. Systems,** Cairo-Egypt
  Sep 2018 ~ Feb 2020

- **GIS Specialist** at **Adeeb Eng. Consultancy,** Abha-KSA
  Aug 2015 ~ Jul 2017

- **GIS Specialist** at **Petrographics for petroleum Serv.,** Cairo-Egypt
  Sep 2009 ~ Dec 2014

Education

Project Management Institute (PMI)

• **PMP Certification Candidate**
Applied for Exam 08/2024

CAIRO UNIVERSITY

• **Master's Degree Preparation**

Started 2022| Faculty of African postgraduate "Geography Department"
using Geospatial DB, GIS, and RS

• **Premaster** in Applied GIS/RS

Graduated 2020| **Grade:** Very Good

AIN SHAMS UNIVERSITY

• **Postgraduate** GIS Diploma | Graduated 2016| **Grade:** Excellent
Project: "Urban Growth Change Detection K.Elsheikh Governorate"

• **Bachelor** of Arts "Geography"| Graduated 2009| **Grade:** Good

Experience Details

SETS SAUDI ARABIA

Project Name: Traffic Accidents Monitoring Center in Riyadh City

Synopsis: a comprehensive project aimed for enhancing road safety and traffic management in Riyadh, Saudi Arabia. The center serves as a centralized hub for monitoring and analyzing traffic accidents in the city. By collecting and analyzing data from multiple entities related to road incidents, the center can identify trends, assess risks, and implement targeted interventions to reduce accidents. Through the use of advanced technologies and real-time data processing and GIS Analytics, the center provides valuable insights dashboard to traffic authorities, enabling them to make informed decisions and take proactive measures to mitigate traffic risks. The project's ultimate goal is to create a safer and more efficient traffic environment for the residents and visitors of Riyadh City.

Role: Geospatial Solution Expert & Database Analyst

Tasks and Responsibilities:

> Use ArcGIS Pro to Prepare, Generate Maps, and visualize traffic accident data.
> Publish Web map services, geoprocessing services using ArcGIS Online, ArcGIS Enterprise.
> Build Database Schema & Relationship entities for the traffic accident data.
> Design, implement, and maintain databases to store traffic accident data.
> Use Both MSSQL Server and Oracle SQL server for data Integration processes.
> Integrate GIS data with other systems for comprehensive analysis and reporting.
> Develop interactive dashboards and reports using Power BI to visualize traffic accidents data.
> Develop and implement data backup and recovery plans on MSSQL & Oracle.
> Create dynamic visualizations that allow users to explore data and gain insights.
> Create Geoprocessing spatial analysis to identify accident hotspots Based on EPDO Standards.
> Integrate, Analyze Data from Multiple Entities as Data providers of traffic accidents data.

ABM AL-OLAIAN SAUDI ARABIA

Project Name: Automatic Violation observation System in KSA

Synopsis: the project aims to leverage remote sensing, GIS, and AI techniques to develop a software solution for automatic observation and detection of violations. This innovative system revolutionizes the monitoring and enforcement of regulations in urban planning. Using satellite imagery, the software collects boundaries of governmental areas and images of the monitored areas. GIS tools will then be employed to analyze and visualize the data, providing spatial context and enabling efficient decision-making. By training machine learning models on a vast dataset of images and data, to be able to recognize patterns and anomalies indicative of violations. This significantly reduce the need for manual inspection and enforcement efforts

Role: GIS Project Manager

Task and Responsibilities:

> Architect & develop a GIS & Remote Sensing Solution for automated AI Violation detection.
> Lead the technical implementation of The Solution (GIS, database, and web application development).
> Define technical requirements and specifications in collaboration with stakeholders.
> Manage the development and integration of GIS and database systems.
> Coordinate with developers, data analysts, UI/UX Designer, and GIS specialists to ensure project milestones are met.
> Conduct regular technical reviews and quality assurance checks.
> Provide technical guidance and support to team members.
> Manage technical risks and issues, implementing mitigation strategies as needed.
> Ensure compliance with technical standards and best practices.

SPECTRUM FOR INFORMATION SYSTEMS, EGYPT

Project Name: DIGITAL TRANSFORMATION PROJECT FOR THE EGYPTIAN ENDOWMENT AUTHORITY (AWQAF) AND ITS AFFILIATED REGIONS

Synopsis: the project aims to modernize endowment asset management. The project focuses on converting paper-based data into digital formats, migrating data to GIS and database systems, and developing analytics and web applications for enhanced user experience. starting from the digitization of paper records related to endowment assets, properties, transactions, and historical data. ensures that information is easily accessible, searchable, and can be analyzed. involves the integration of GIS and database systems to create a unified schema for endowment asset management. to map and visualize endowment assets, properties, and boundaries, providing stakeholders with a spatial understanding of the data. The database system stores and manages the digital data, ensuring data integrity and accessibility.

Role: GIS Project Manager

Task and Responsibilities:

> Implement Technical Enhancement& preparation for GIS AWQAF Data using ESRI ArcGIS tools.
> Define technical improvement requirements in collaboration with stakeholders.
> Manage the development and integration of GIS and database systems on MSSQL.
> Coordinate with developers, data analysts, and GIS specialists to ensure project milestones are met.
> Conduct major Enhancement changes in the web applications as per client needs.
> Manage technical risks and issues, implementing mitigation strategies as needed.
> Conduct regular technical reviews and quality assurance checks.
> Negotiate with Project stakeholders for project operation hand over & technical support agreements.

RAS ALKHAIMA EMIRATE MUNICIPALITY, GIS DEP.

Role: GIS Business Analyst/ GIS Analyst

My role as daily operation in the Municipality was to Design GIS solutions and workflows using ESRI Platform products (ArcGIS Pro, ArcGIS Online, ArcGIS Enterprise) to meet entities' business requirements , collaborate with GIS developers and architects to ensure solutions align with technical requirements, bridging the gap between business needs and GIS technology. analyzing business requirements, identifying GIS solutions, and supporting the implementation of GIS projects to meet business objectives.

Task and Responsibilities:

> Manage Entities' Accounts, conduct multiple Analysis Meetings and Collaboration processes to Translate business needs to technical specifications.
> collaboration among RAK governmental entities in the Spatial Data Infrastructure project SDI on behalf of the Municipality.
> Define needed GIS environment at the entity's on-premise or on Mun-servers, Such as: Web App, web map service, GIS Desktop.
> Use ArcGIS Online, ArcGIS Enterprise to Develop NVM for user acceptance & better delivery.
> Analyze spatial and non-spatial data to extract insights and support decision-making
> Prepare BRD's & SRS's, re-organize business needs, translating into a GIS prospective technical representation.
> Projects: RAK SDI, RAKEZ, RAKCSS, RAKGeoMap, Land Management Application.
> Working with the GIS manager to build a GIS Strategy Plan and Building Capacity programs.

EDGE-PRO FOR INFORMATION SYSTEMS, EGYPT

Role: Technical Training Department Manager

Task and Responsibilities:

> Develop Training curriculums (standards, Customized, tailored) for Company's customers trainees Using HEXAGON Products
> Manage Around-Egypt Universitas agreements for providing the teaching staff and students the industry most used applications, GIS, and Remote sensing Knowledge-base, and Brand-New Areas such as AI techniques in Image processing analysis tools.
> Provide technical support and training to the staff on different area of interest such as: database servers, GIS& IoT integrations, AEC transformations.
> Attend Geospatial events for representation of Edge-pro and its provided services & Technology.

SOFTWARE

- **Microsoft Office**
- **ArcGIS Desktop Applications**
  (ArcMap, Arcpro)
- **ArcGIS Platform**
  (ArcGIS Online, ArcGIS Enterprise,
  ArcGIS Server, ArcGIS Image Server)
- **HEXAGON Desktop**
  (GEOMEDIA, ERDAS IMAGINE)
- **HEXAGON Platform**
  (M.App Enterprise, ERDAS APOLLO,
  LUCIAD Fusion)
- **AutoCAD**, **AutoCAD Map 3D**
- **Open-Source GIS**
  (QGIS, Global Mapper, SuperMap)
- **SQL Database Servers**
  (MSSQL, ORACLE, POSTGRES)
- **Business Analysis & P.M**
  (Mi. Project, Visio, Diagram.io)
- **Front-end Web Development**
  (HTML, CSS)
- **Back-end Web Development**
  (c#, Python)
- **Unified Geospatial** (OGC Service
  Protocols, INSPIRE DB Schemes)
- **Artificial Intelligence Techniques**
  (Machine Learning, Deep learning)
- **Design** (Photoshop, Video Editing)
- **Graphical user Experience** UX
  (Figma)
- **Data Analytics**
  (Advanced Excel, DAX Functions,
  Power Query, PowerBI, SPSS)

Membership

- **NASA Space App Competition**,
  Cairo, Egypt
- **ITI "Information Technology
  institute"**, Cairo, Egypt
- **Oasis Academy**, Ismailia, Egypt.

MILITARY SURVEYING AUTHORITY EGYPTIAN ARMED FORCES

Role: Development Team Leader-Egyptian NSDI

Task and Responsibilities:

> Create and Manage SDI Applications, web map services, and workflow systems using the unified Spatial Databases for authorities .
> Provide interactive dashboards and geospatial database mapping and Accessibility using Power BI and M.App Enterprise feature analyzer.
> Develop web, desktop and mobile applications using Hexagon software and Open-Source platforms.

MILITARY SURVEYING AUTHORITY EGYPTIAN ARMED FORCES

Role: Database Administrator-Egyptian NSDI

Task and Responsibilities:

> Manage and optimize the Egyptian NSDI Postgres database server to ensure data integrity, security, and accessibility.
> Generate reports Using M.App enterprise feature analyzer to present single & integrated multiple GIS Data within the NSDI in easily digestible standard reports.
> Develop Quick Sight and SQL Queries to automate analysis and visualize data
> Implement data to predict trends, perform statistical analysis Using Python libraries.
> Implement and develop spatial database configurations, spatial analysis using POSTGIS Library.
> Manage user permissions and levels for NSDI database Server security.
> Implement Database Replication & Clustering process for HA availability.
> Monitor and improve database server performance, capacity, and load-balancing abilities for further expansion requirements.

EDGE-PRO FOR INFORMATION SYSTEMS, EGYPT

Role: GIS & Remote Sensing Senior Analyst

Task and Responsibilities:

> Participate in Major RS projects such as: Monitoring construction violations using Satellite imagery, and Discovering Types of Minerals for mineral resources inventory.
> Create Spatial models in major projects with the governmental ministries such as: Agriculture analysis, Crop classification, Automated Change Detection, Bathymetry Applications, Mineral exploration, and Feature extraction.
> Implement Artificial intelligence techniques "Machine Learning in Image processing, Satellite imagery classification" and "Deep learning Feature Extraction, Forest burn mapping"
> Work with Egyptian armed forces authorities within high-level RS projects.
> Provide specialized, tailored Remote Sensing Models & Application for governmental sectors for specific purposes Such as: Ministry of irrigation, Ministry of planning, armed forces authorities.
> Implement Imagery catalogue using ERDAS APOLLO and produce multiple OGC web map Services.

ADEEB-ELGANOUB ENGINEERING CONSULTANCY ABHA, KSA

Role: GIS Analyst

Task and Responsibilities:

> Integrate GIS, Computer-Aided Design (CAD) and Global Positioning Systems (GPS) for GIS mapping services, Data Conversions and reformatting Using ESRI Software "ArcGIS 10.6".
> Collect, manage, and maintain spatial datasets, ensuring data integrity and accuracy
> Produce maps including contour maps, spatial maps, thematic and zonal maps, landscape maps, environmental maps for mining.
> Generate an efficient data management model using ArcGIS for easy access, analysis, and utilization.

PETROGRAPHICS FOR PETROLEUM SERVICES, EGYPT

Role: GIS Specialist

Task and Responsibilities:

> Provide Data management, archiving spatial data for service areas.
> Create Sites Maps, extract exploration maps, produce map Layouts and digitizing services with data entry.
> Conduct spatial analysis and modeling to support decision-making processes.
> Collect, manage, and maintain spatial datasets, ensuring data integrity and accuracy.
> Build spatial Geodatabases using ArcGIS 10.2 with Raster-vector data.

Initiatives & Projects

EGYPT   OVER THAN **6** YEARS

TRAINING CONSULTANT

- ✓ Teaching GIS, RS topics for **Dubai Municipality Technical staff.**
- ✓ Teaching Remote sensing Theoretical & Practical for **I.T.I, Telecommunication ministry**
- ✓ Teaching GIS and Remote Sensing at **MIA Academy-Maadi, Cairo & OASIS Academy- Ismailia**.
- ✓ Lecturing Remote sensing Theoretical & Practical for **local government agencies and governmental/private institutes** around Egypt.
- ✓ Providing **online sessions** for students in GIS/Remote sensing industry.
- ✓ Identifying and **proposing solutions** to any road bumps that the students/team hits along the way of any practical work.
- ✓ GIS/RS lessons on my **YouTube Channel**: https://youtu.be/OqNlVMRnDb4

NIRAS CO. WARSAW, POLAND   Feb-Apr 2022

REMOTE SENSING EXPERT

- ✓ NIRAS has concluded with European Union Delegation to Egypt an agreement (Main Contract) for implementing the project **Crop Classification and Mapping Fields**.
- ✓ support the ongoing operations of the WAU, working side by side with the Planning Sector staff to produce especially accurate Crop Maps for the Delta.

SAUDI ARABIA   Aug-Oct 2021

GEOSPATIAL SOLUTION ARCHITECT

- ✓ Provide help & support online along 3 months for projects involving detailed spatial analysis for GIS projects.
- ✓ Initiate the SRS document for **Jizan Region Municipality** for GIS observatory project.
- ✓ Initiate the Technical proposal document for **Mecca the Holy capital Municipality** for GIS observatory project.
- ✓ Creating projects implementation plans, phases and used enterprise systems.

ENOC Co. DUBAI, UAE   Feb 2013 ~ Jan 2014

GIS DRAFTSMAN

- ✓ Providing an **inventory** for well logging data, creating & administrating geodatabase.
- ✓ Reformatting, Data conversion, Integration and Quality assurance.
- ✓ Providing Data management, archiving spatial data for petroleum areas, well-loggings and mapping, extracting exploration maps.