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Summary

A **GIS / Software Developer** with experience in various **GIS** technologies and software development. I have a B.A in **Geographic Information Systems (GIS)** and have worked with StrategizeIT Egypt and United ATS, where I developed GIS applications and customized **Odoo** modules. I am proficient in GIS technologies such as **ArcGIS, QGIS, and GeoServer**, as well as software development skills like **Python, Django, REST APIs, JavaScript, JQuery**, and **HTML/CSS**. I have demonstrated my soft skills in communication, teamwork, responsibility, and working under stress. I have certificates in Advanced Aeronautical Cartography, Aerodrome Obstacle Evolution, and Technical Support Fundamentals. I am eager to enhance my skills and gain more experience.

Skill Highlights

- Software Development
- GIS Development
- Odoo Development

- Creative Solutions
- Troupleshooting
- Service-focused

Experience

GIS / Software Developer – Mar 2022 to Present
Strategizeit Egypt (Full-time), Cairo
- Spearheaded the development of GIS applications and cutting-edge geoprocessing tools to bolster operational efficiency.
- Conceptualized and streamlined project workflows for optimal performance.
- Pioneered innovative solutions, meticulously planning, creating, and delivering captivating proof of concept demonstrations.
- Designed and customized Odoo modules to enhance functionality.
- Crafted web mapping applications and powerful geo-processing tools to align with organizational needs.
- Orchestrated seamless integration between ArcGIS and Odoo systems.
- Rigorously tested applications and executed precise bug fixes.

GIS / Software Developer – Jun 2021 to Mar 2022
United ATS (Full-time), Cairo
- Engineered robust GIS applications and high-impact geoprocessing tools to bolster daily operations.
- Championed the development ahmed deployment of both web-based and desktop GIS applications.
- Strategized, executed, and optimized workflows and geoprocessing models.
- Proficiently configured and managed GIS Servers (GeoServer, ArcGIS Server, QGIS Server).
- Published GIS web services to facilitate data access.
- Played a pivotal role in quality assurance checks, proactively recommending updates and innovative techniques.
- Expertly manipulated, extracted, located, and analyzed geographic data.

- Crafted specialized maps and conducted precise digitization of roads, buildings, and man-made features from satellite imagery.
- Skillfully digitized streams, basins, and watersheds from satellite images while ensuring data quality.

Software Developer – Sept 2019 to Mar 2021
Self-Employed (Freelance), Cairo
- Innovatively developed software solutions tailored to meet diverse customer requirements.
- Spearheaded the creation and implementation of source code for cutting-edge applications.
- Rigorously tested and meticulously debugged source code to ensure optimal performance.

GIS Specialist – Oct 2018 to Mar 2019
Pathfinder Geomatex (Full-time), Fayoum
- Led GIS database development, conducting comprehensive qualitative and quantitative analyses while creating compelling maps.
- Collaborated seamlessly with project team members and stakeholders to define data requirements, project specifications, and desired outcomes.
- Conducted precision digitization and meticulously compiled, manipulated, and refined geographic data from various sources, including CAD, field observations, satellite imagery, aerial photographs, and existing maps.

GIS Specialist – Oct 2018 to Mar 2019
Esri North Africa (Internship), Cairo
- Skillfully created and modified geographic data from diverse sources such as text files, hard-copy maps, and GPS data.
- Demonstrated expertise in data conversion from external GIS file formats, including the seamless import of KML files into shapefile format.
- Conducted precise digitization tasks, contributing to data accuracy and completeness.

GIS Specialist – Jul 2017 to Aug 2017
National Authority for Remote Sensing & Space Sciences - NARSS (Internship), Cairo
- Proficiently established Geodatabases and shapefiles to facilitate data management.
- Conducted accurate digitization tasks and contributed to spatial analysis, enhancing data insights.

Surveyor – Aug 2016 to Nov 2016
The Arab Contractors (Internship), Zagazig
- Utilized advanced equipment and tools to meticulously measure land features, including longitudes and latitudes.
- Provided guidance and supervision to field staff to ensure precise data collection.
- Delivered comprehensive reports detailing survey results.

Projects

Zr3i - Land and Crop Field Management and Monitoring System.
Position: Senior GIS/Software Developer.
Project Description:
- Spearheaded the development and enhancement of the ZR3i project, a comprehensive application designed for the efficient management and monitoring of lands and crop fields utilizing satellite imagery and advanced GIS technologies.

Key Contributions and Achievements:
- Led a dedicated team in revamping and optimizing the project, resolving existing issues, and ensuring a seamless user experience.
- Integrated cutting-edge weather analysis tools to provide real-time weather data, enhancing decision-making capabilities for farmers and landowners.
- Implemented advanced GIS functionalities, leveraging Laravel and Google Maps API to visualize and analyze spatial data.
- Introduced additional indicators to enhance the system's analytical capabilities, empowering users with valuable insights into land and crop conditions.
- Successfully transformed a complex and messy project into a streamlined and powerful resource for land and agriculture management.

Bailiffs Department Manager (BDM).
Position: GIS Developer.
Project Overview:
- Played a pivotal role in the development and management of the Bailiff Department Manager (BDM) project, a multifaceted system designed for the efficient supervision and monitoring of bailiffs.

Key Contributions and Achievements:
- Led the development efforts of the GIS component, providing powerful spatial analysis tools and interactive dashboards.
- Ensured seamless integration between the GIS and web application components for synchronized data and real-time updates.
- Implemented an effective task assignment system within the web application, optimizing bailiff management and performance monitoring.
- Collaborated in the development of the mobile application, enhancing task submission and execution capabilities for bailiffs.
- Utilized Python, Odoo, ArcGIS APIs, and ArcGIS Enterprise to create a robust and interconnected ecosystem.
- Adopted an MVC (Model-View-Controller) architecture for the project, enhancing code organization and maintainability.

ACGP - Aeronautical Cartography Geo Portal.
Position: GIS Developer.
Project Overview:
- Contributed significantly to the Aeronautical Cartography Geo Portal (ACGP) project, aimed at automating the generation of aeronautical charts for aviation purposes.

Key Contributions and Achievements:
- Focused on backend engineering, playing a crucial role in developing modules for data extraction and storage.
- Extracted geographic information from diverse aviation reports, transforming raw data into structured information for further analysis and visualization.
- Designed and implemented database solutions to efficiently store and manage aeronautical data, ensuring accessibility for various analytical processes.
- Utilized the extracted data to create visualizations and perform specialized analyses to support aeronautical chart generation.
- Worked extensively with ArcMap and ArcGIS Server, leveraging these tools to publish and manage GIS web services.
- Collaborated with cross-functional teams to ensure the seamless integration of backend functionalities with front-end components.

SafeGuarding - Ensuring Safe Airspace for Aerodromes.
Position: GIS Developer.
Project Overview:
- Contributed significantly to the SafeGuarding project, a critical initiative focused on ensuring the safety and usability of airspace around aerodromes. The project aimed to prevent obstacles that could impede aircraft operations and jeopardize the functionality of aerodromes.

Key Contributions and Achievements:
- Served as a GIS Developer in the project, responsible for developing and implementing key components of the software system.
- Designed and engineered modules that automatically identify and monitor potential obstacles within the vicinity of aerodromes.
- Developed automated reporting capabilities for documenting identified obstacles and conducting comprehensive aeronautical studies.
- Utilized GIS technologies and spatial analysis to assess and visualize the penetration of obstacles into aerodrome airspace.
- Worked on enhancing the software's visualization capabilities, enabling the representation of obstacle data in both 2D and 3D formats.
- Collaborated closely with aviation authorities and stakeholders to ensure regulatory compliance and the effective implementation of safety measures.

Education

B.A in Geographic Information Science (**GIS**) and Geography - 2019
Zagazig University

Certifications

- Advanced Aeronautical Cartography – United ATS (ICAO – Trainer Plus)
- Aerodrome Obstacle Evolution – United ATS (ICAO – Trainer Plus)
- Initiating and Planning Projects - University of California, Irvine (Coursera)
- Technical Support Fundamentals – Google (Coursera)
- Data Visualization with Python – IBM (Coursera)
- Python for Everybody – University of Michigan
- Introduction to GIS Mapping – University of Toronto (Coursera)
- Advanced GIS – NARSS
- ICDL – MCIT

Technologies

GIS

- ArcGIS Suit
- AutoCAD
- QGIS Desktop
- ENVI
- GeoServer
- ERDAS Imagine

GIS Development

- Leaflet.js
- Google Maps API
- PostGIS
- openlayers
- GeoDjango
- ArcGIS APIs
- GeoJson
- Mapbox
- GIS Web Services

Back-End Development

- Python
- PostgreSQL
- Django
- SQLite
- RESTful APIs
- Git
- MVC
- Github

Front-End Development

- JavaScript
- JQuery
- Ajax
- React.js

Desktop Development

- QT Designer
- PyQT
- PySide
- Tkinter

Languages

- **Arabic –** Mother Tongue.
- **English –** Conversational.