



Mina Fahim *GIS & RS Engineer | Developer*

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PROFILE

Experienced GIS Developer with a strong focus on leveraging environmental data, spatial analytics, and machine learning to build dynamic web applications. Proficient in geospatial technologies, including mapping, geocoding, and spatial data analysis, with expertise in integrating complex datasets into visually compelling and user-friendly interfaces. Skilled in front-end web development with proven experience in developing responsive web applications using React and Material UI. My portfolio includes end-to-end GIS web applications utilizing open-source tools like OpenLayers and Leaflet, robust PostgreSQL/PostGIS databases, and seamless integration with mapping servers such as GeoServer and MapServer. Continuously exploring innovative approaches to harness geospatial data for solving complex environmental and analytical challenges.

PROFESSIONAL EXPERIENCE

ViaGIS, *GIS Data Engineer*

06/2022 – present
Vilnius, Lithuania

Responsible for:

- **Design and develop** web-based **mapping solutions**, application functionalities.
- **Build responsive, user-friendly applications** using **React** and **Material UI**, integrating dynamic components and modern design principles for enhanced user experience.
- **Develop and maintain** GIS web applications utilizing **OpenLayers**, **Leaflet**, **GeoServer**, and **MapServer** for efficient geospatial data visualization and interaction.
- **Design, develop, and implement** geospatial databases and systems to support complex **spatial data structures** and operations.
- Perform advanced **geospatial modeling** and **spatial analysis** to extract actionable insights from environmental and geographic data.
- **Standardize, validate, and manage** geographic data to ensure accuracy, consistency, and interoperability across systems.
- **Review and assess GIS datasets** for quality, accuracy, and alignment with project specifications.
- **Administer, troubleshoot, and optimize** GIS applications and solutions, ensuring system reliability and efficient performance.

EDGE Pro for Information Systems, *GIS & RS Engineer*

03/2020 – 09/2021
Cairo, Egypt

Website: edge-pro.com 🌐 || mped.gov.eg 🌐

Project: *National Spatial Data Infrastructure (NSDI) at the Ministry of Planning and Economic Development, Cairo, EG.*

Responsible for:

- **Manage, process, and analyze** data obtained from **remote sensing systems** to extract meaningful insights and support decision-making.
- **Develop spatial data layers** using advanced **GIS technologies**, tools, and equipment to support mapping and spatial analysis projects.
- **Design, document, and implement** procedures for **spatial system administration** to optimize system performance and ensure data integrity.

AIESEC, *Volunteer*

07/2018 – 09/2018
Craiova, Romania

Website: aiesec.org 🌐

Responsible for:

- giving sessions on empowering youth.
- fostering educational spaces about life on land.

EDUCATION

Vigo University , <i>Research Intern, Department of Natural Resources and Environmental.</i> "AI-Based Environmental Data Modelling and Validation"	03/2026 – 06/2026 Vigo, Spain
Vilnius Gediminas Technical University , <i>PhD. Environmental Science</i> "Predictive Modeling for Air Pollution Forecasting: Integrating Machine Learning, Remote Sensing, and Geospatial Analysis"	2023 – 2027 Vilnius, Lithuania
Vilnius Gediminas Technical University , <i>M.Sc. Innovative Solutions in Geomatics</i> "Analysis of satellite image classification using different algorithms" includes artificial intelligence algorithms.	2021 – 2023 Vilnius, Lithuania
Riga Technical University , <i>M.Sc. Innovative Solutions in Geomatics,</i>	2021 – 2023 Riga, Latvia
Cairo University , <i>Bachelor of Civil Engineering</i>	2014 – 2019 Cairo, Egypt

SKILLS

Geospatial & Remote Sensing

- **GIS & Remote Sensing Software:** QGIS, SNAP (ESA), Hexagon Geospatial (ERDAS IMAGINE, GeoMedia, M.App Enterprise), ESRI (ArcGIS Pro, ArcGIS Online), Bentley Systems (Descartes, ContextCapture, OpenBuildings Designer), Autodesk (AutoCAD, Revit, Meshmixer), Google Earth Engine (GEE).
- **Web Mapping & Geospatial APIs:** Leaflet, OpenLayers, GeoServer, MapServer
- **Spatial Databases:** PostgreSQL / PostGIS

3D Modeling & Visualization

- MeshLab, CloudCompare, Blender

Programming & Development

- **Languages:** Python, JavaScript
- **Front-End Frameworks:** React, Angular, Material UI, Redux
- **Version Control:** Git, GitLab
- **Management:** Jira

PUBLICATIONS

An Assessment of the Multi-Input Spatiotemporal RF-XGBoost Hybrid Framework for PM10 Estimation in Lithuania, <i>M. A. S. Fahim, J. Sužiedelytė Visockienė. Sustainability.</i> https://doi.org/10.3390/su18042022 	2026
Satellite-Driven Monitoring and Prediction of Atmospheric Nitrogen Dioxide in Lithuania, <i>M. A. S. Fahim, J. Sužiedelytė Visockienė</i> 10.18178/IJESD, ICEEA Paris, France.	2025
ASSESSING AI ALGORITHMS FOR PREDICTIVE MODELING OF SPATIOTEMPORAL PM₁₀ AIR POLLUTION, <i>M. A. S. Fahim, J. Sužiedelytė Visockienė, R. GRUBLIAUSKAS</i> 28th Conference for Junior Researchers „Science – Future of Lithuania“	2025
A Comparative Analysis of Machine Learning Techniques for PM10 Forecasting in Vilnius, <i>M. A. S. Fahim, J. Sužiedelytė Visockienė</i> ICEMSR 2024, Prague, Czechia.	2024
Air pollution sources and their impact on the environment., <i>Mina Adel Shokry Fahim, Jūratė Sužiedelytė Visockienė</i> 27th Conference for Junior Researchers „Science – Future of Lithuania“	2024

- Air quality and environmental health: evaluating pollution sources and mitigation strategies**, *Mina Adel Shokry Fahim, Jūratė Sužiedelytė Visockienė* 2024
Poster - Faculty of Chemistry and Geosciences, Institute of Chemistry, Vilnius University:
Conference dedicated to the 100th birthday of geology professor Juozas Paškevičius. Vilnius, Lithuania
- AI-Based Satellite Image Classification: An Analysis of Different Algorithms on PlanetScope and Sentinel Imagery**, 2023
Mina Adel Shokry Fahim, Jūratė Sužiedelytė Visockienė
26th Conference for Junior Researchers „Science – Future of Lithuania“
- Characteristics and Dynamics of the Latvian, Lithuanian, and Egyptian Marine Cadastre.**, *Janis Kaminskis, Leila Neimane (Latvia), Mina Adel Shokry Fahim (Egypt), Konradas Jankunas (Lithuania) and Iveta Stamure (Latvia)* 2022
FIG Congress 2022, Warsaw, Poland.