Saghi SARAFI

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Experienced spatial data analyst with a robust academic foundation and hands-on expertise in database management, geoprocessing, and remote sensing technologies. Skilled in urban design, environmental analysis, sustainability, and proficient in leveraging GIS tools like ArcGIS and QGIS for spatial analysis and visualization.

Experiences

May 2021- Sep 2023
Researcher, Carinthia University of Applied Science, Villach, Austria
• Data capture and digitizing of building footprints in Upper Austria

Aug- Nov 2022
Researcher, University of New Mexico, NM, USA
• Leveraged remote sensing technology to detect Urban Heat Islands

Feb 2019 - Sep 2020
Urban development engineer, Naghshine Mandegar Engineering Office, Sanandaj, Iran
• Supervised the implementation of buildings construction

Apr 2016 - Feb 2018
Spatial data analyst, Dynamic Kariz System Design and Architecture Company, Tehran, Iran
• Developed the national Geolocation and navigation tools for Iran.

Skills

Analytic Platform: PostgreSQL, FME, Neo4J, KNIM, Google Earth Engine (GEE).

Programming Languages: Python, JavaScript, JSON, CSS, HTML.

Geographical Information System: ArcGIS, ArcGIS Pro, QGIS, GRASS, GeoDa, TerrSet, eCognition.

Data Visualization Platform: ESRI City Engine, Auto Desk AutoCAD, ScetchUp.

Language Skills: English (excellent), German (basic), Persian (native).

Education

2025- present
PhD. Student in Geography
University of New Mexico

2020- 2023
MSc. Spatial Information Management
Carinthia University of Applied Science (GPA 1)

2012- 2015
MSc. Urban Design
Yazd University (GPA of 17.34 out of 20)

2007- 2010
Urban Planning
University of Kurdistan (GPA of 16.54 out of 20)

References

Dr. Gernot Paulus - Carinthia University of Applied Science
Villach, Austria
Email: G.Paulus@fh-kaernten.at
Phone: +43 (590) 500-2240

Dr. Christopher D. Lippitt - University of New Mexico
Albuquerque, NM, USA
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Phone: +1 (505) 277-7374

Projects

Aug - Nov 2022
University of New Mexico, NM, USA
Remote Sensing Exploration: Unraveling Urban Heat Islands Dynamics

Engaged in a groundbreaking project at the intersection of remote sensing and urban climatology, I conducted a comprehensive study on Urban Heat Islands (UHI). The project encompassed data analysis, meticulous land cover (LC) classification, and rigorous validation of satellite-derived temperature data.

Key Accomplishments:
- Utilized Python and JavaScript programming languages to prepare Google Earth Engine (GEE) for the analysis of remote sensing data, demonstrating proficiency in scripting and automation for large-scale geospatial analyses.
- Leveraged Google Earth Engine as a powerful analytical software engine to detect and analyze the spatiotemporal patterns of UHIs in twelve diverse cities worldwide.
- Executed advanced data validation by comparing results derived from land surface temperature (LST) calculated from satellite datasets with LST obtained from in-situ measurements.

Apr - Jun 2021
Carinthia University of Applied Sciences, Villach, Austria
Dynamic Bicycle Station Mapping: Real-Time GeoVisualization Mastery

Embarked on an engaging project at the forefront of geospatial technology, I spearheaded the development of a dynamic bicycle station mapping system in Chicago. This comprehensive initiative involved the seamless integration of PostgreSQL, Node.js, and Leaflet for real-time geo-visualization.

Key Accomplishments:
- Established a robust PostgreSQL database infrastructure to efficiently store and manage bicycle station data, showcasing a keen understanding of database design and optimization.
- Crafted a dynamic Node.js server to handle intricate queries, demonstrating proficiency in server-side scripting and API development for seamless data retrieval.
- Transformed raw data into GeoJSON format, employing adept data processing skills to facilitate smooth communication between the server and the client-side application.
- Orchestrated the visualization of the geo-processed data on a Leaflet web map, offering an intuitive and user-friendly interface for real-time exploration of bicycle stations in Chicago.

Apr 2016 - Feb 2018
Dynamic Kariz System Design and Architecture Company, Tehran, Iran
Strategic Geospatial Infrastructure Development: Revolutionizing National Geo-location and Navigation Tools

Participated in a national project, exploring different ways to improve information systems and leading the development of geo-location and navigation tools at a national level.

Key Accomplishments:
- Utilized ArcGIS as a powerful geospatial analysis tool to meticulously study and assess different information infrastructure models, showcasing proficiency in leveraging advanced GIS technologies for strategic decision-making.
- Led the development of a robust national Geo-location and navigation system, demonstrating expertise in system design and architecture for large-scale geographic coverage.
- Employed ArcGIS for the analysis and preparation of accurate databases, laying the foundation for mapping and routing services covering the entire expanse of Iran.