

Taimoor Hanif

Full-Stack Geospatial Developer / GIS & Remote Sensing Data Engineer / GIS Specialist

Contact Information

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Education

[University of Twente](#), Netherlands

MSc Spatial Engineering | CGPA: 3.80
2025

September 2023 - July

Thesis: "Development of a sensor placement strategy framework to enhance UHI monitoring"

[National University of Sciences and Technology](#), Pakistan

Bachelor of Geoinformatics Engineering
2021

September 2017 - July

FYP Thesis: "Crop Recommendation System Using Machine Learning"

Professional Experience

GIS Engineer
(Internee)

[CGI Netherlands](#), Netherlands

February 2025 – April 2025 (Internship)

- Developed custom geometry validation features within IQGeo, a proprietary web-based geospatial framework, and implemented a data model for electric grid operators.
- Used Docker to set up the application on the local machines with success.
- Authored comprehensive technical documentation to support reproducibility, team onboarding, and cross-functional communication.

GIS Specialist

[IQLand.ai](#), USA

April 2024 – July 2024 (Part-time, Worked Remotely)

- Designed a spatial PostGIS database and automated geospatial workflows to process large-scale geospatial real estate data to extract valuable information from raw data.
- Integrated results into a web-mapping platform using Leaflet, capable of handling large datasets efficiently, enhancing user interaction and data visibility.
- Streamlined data pipelines using Python to extract and deliver relevant spatial insights.

Sr. GIS Data
Analyst

[GeoTech](#), Riyadh, Saudi Arabia

September 2021 – October 2023 (Worked Remotely from Pakistan)

- Automated remote sensing workflows using Python and Google Earth Engine, with deployments in Google Cloud.
- Built and ran containerized processes with Docker, optimizing performance in a distributed cloud environment.
- Specialized in extracting information from large-scale satellite datasets for scalable analytics projects (specifically for vegetation and forestry applications).

GIS Developer

[REMAP.ai](#), Brisbane, Australia

August 2022 – February 2023 (Part-time, working remotely from Pakistan)

- Developed front-end modules using Node.js and Vue.js, visualizing large-scale cadastral and real estate data on the web platform.
- Engineered advanced spatial analysis scripts to extract insights from raw datasets with complex geometries.
- Ensured high-performance rendering and smooth integration of large spatial datasets into the platform.

Freelancer -

[Fiverr.com/Upwork](https://www.fiverr.com/upwork), Remote

GIS

Developer/

Data

Engineer

June 2020 – Currently Working (Part-time)

- Fiverr profile: <https://www.fiverr.com/taimoorh13>
- Upwork profile: <https://www.upwork.com/freelancers/~0102d3c1d1de6adcab>
- Delivered 80+ geospatial projects using Python, FastAPI, Docker, and PostGIS, covering domains like UHI, agriculture, and urban analytics.
- Built interactive map tools and automated processing pipelines using GEE, QGIS, and web mapping frameworks (Leaflet, OpenLayers, MapLibre, Mapbox).
- Applied Agile principles, version control via Git, and DevOps best practices across international remote teams.

GIS Analyst

[TPL Maps Ltd.](#), Islamabad, Pakistan

July 2021 – October 2021

- Administered and optimized PostGIS databases, building automated SQL workflows for ETL and reporting.
- Generated spatial reports to support operational planning and client deliverables.
- Contributed to streamlining data pipelines by reducing manual tasks through automation.

Other

Projects

- **Crop Recommendation System using Machine Learning** (*Bachelor Thesis*)
Developed a cost-effective ML-based model to recommend optimal crops based on weather, soil type, and farm size. Built a user-friendly web interface for input and visualization.
- **Web-Based GIS Mapping Platform**
Delivered a complete web GIS solution to monitor agricultural fields featuring spatial data visualization, filtering, and attribute editing using *PHP, Vanilla JS, PostgreSQL/PostGIS*, and *Leaflet*.
- **Weather Station Data API** (*Freelance Project*)
Developed a RESTful API using *FastAPI* to serve weather station data (temperature, humidity, wind speed) stored in a *PostgreSQL/PostGIS* database. Implemented endpoints for querying data filters and returned results for integration into a web dashboard.
- **Urban Heat Island Analysis in Zwolle, Netherlands** (*Master's Case Study*)
Assessed UHI impact using the *PET model* and proposed mitigation strategies. Simulated the effects of interventions using spatial data analysis and produced a policy recommendation.
- **Tarbela Dam Sedimentation Assessment (Pakistan)**
Estimated storage capacity loss using statistical analysis of satellite imagery, highlighting long-term hydrological risks.
- **Forest Cover Change Detection using Satellite Imagery**
Analyzed multi-temporal Sentinel-2 imagery to detect changes in forest using change detection algorithms. Processed data in *Google Earth Engine*, classified land cover using *Random Forest*, and visualized results to assess deforestation patterns and potential drivers.
- **Solar Panel Detection using Neural Networks** (*Course Project – Master's Program*)
Trained a U-Net deep learning model to identify rooftop solar panels from high-resolution remote sensing imagery. Pre-processed labeled datasets, trained the model using *Keras/TensorFlow*, and evaluated segmentation accuracy.

Skills & Competencies

Programming Languages: C++, Python*, R, JavaScript*, PHP*

Web Development: Node.js*, Vue.js, ReactJS*, FastAPI*, Python-Flask (Actively learning front-end frameworks as well)

Mapping Frameworks: Leaflet*, OpenLayers, Mapbox*, MapLibre, ArcGIS JS API, Google Maps API*

AI/ML: Image Classification Techniques*, Spatial Modelling (scikit-learn, PyTorch, TensorFlow)

Databases: PostgreSQL*, PostGIS*, MySQL, MongoDB*

Geospatial Tools: Google Earth Engine*, QGIS*, ArcGIS Suite*, GRASS, ENVI, ERDAS*, GeoServer

Cloud & DevOps: Docker, Git*, Linux (Ubuntu)*, Google Cloud, AWS

Languages: English*, Dutch, Urdu*

* denotes advanced skill level.

Awards & Honors

- Recipient, Merit Certificate – Student Member Program Committee, ITC, 2024
- Recipient, Chancellor's Silver Medal in Bachelor's Degree, 2021
- Recipient, First Runner-up FYP NUST, 2021.
- Recipient, Finalist in FICS Competition, 2021