Fyeqa Akram

Geospatial Data Scientist

Berlin, Germany

fyeqaakram30@gmail.com +49 176 4578 8745 Github Portfolio Linkedin

Professional Summary

Geospatial data analyst with 3+ years of experience applying GIS, remote sensing, and machine learning to climate resilience and humanitarian decision-making. Designed and deployed automated geodata pipelines and spatial risk models used in conservation planning (WWF) and research operations (BIH).

Experience

Data Analyst (Research Operations) Berlin Institute of Health at Charité *2024 – Present*

- Developed an automated metadata extraction pipeline using **R**, processing over 10,000 research articles; reduced manual processing time by **70%** and improved extraction accuracy to **92%**
- Built reproducible workflows for parsing author contributions and research structures using R and regex patterns, enabling faster curation than manual extraction.
- Delivered weekly insights and structured reports to cross-functional teams, accelerating research planning and operational decision-making.
- Repository: View on GitHub

Biodiversity Risk Analyst WWF Germany *2023 – 2024*

- Conducted biodiversity risk assessments for 3+ corporate sites using WWF's Biodiversity Risk Filter tool, supporting ESG reporting and biodiversity action planning.
- Used **R (sf, ggplot2, leaflet)** and **QGIS** to analyze and visualize spatial outputs, creating thematic maps, interactive dashboards, and data-driven reports for internal and external stakeholders.
- Curated and validated spatial and environmental datasets using **python** for integration into the Risk Filter tool.
- Supported data workflows, including data collection, spatial data cleaning, and preparation for geospatial risk modeling and ESG reporting
- Developed visual communication materials (case studies, maps, blog graphics) to increase external awareness of biodiversity risk and support WWF's engagement with corporate partners
- Translated ecological risk outputs into actionable KPIs aligned with global ESG frameworks such as TNFD

GIS Analyst TPL Corp. *2021 – 2022*

- Extensive experience managing and optimizing large-scale spatial databases in **PostgreSQL/PostGIS**, supporting nationwide datasets including roads, buildings, POIs.
- Developed advanced SQL/PostGIS queries and stored functions to automate data quality assurance, reducing error rates by 35%
- Designed and maintained spatial databases supporting multi-city urban infrastructure planning and public health analysis
- Built a **Flask-based** internal web app to generate automated weekly statistics reports, integrated with **Jenkins** for scheduling and delivery
- Led migration and transformation of 100,000+ spatial features ensuring data integrity and accessibility for internal mapping applications
- Used **QGIS** for spatial data validation, visualization, and manual edits, improving data accuracy and stakeholder communication
- Developed SQL/PostGIS queries to manage and analyze spatial COVID-19 datasets, integrating health data with geographic features to support public health monitoring and response
- Collaborated with cross-functional teams to support GIS-driven decision-making in urban planning and COVID-19 response

Core Competencies

GIS& Remote Sensing	QGIS, ARCGIS, SNAP, Google Earth Engine
Programming	Python, R, SQL/POTSGRES, MATLAB, Git/GitHub, Linux
Automation & Reporting	ETL pipelines, Data wrangling, Data Visualization (Tableau), Automation, Reporting, QA processes, Machine Learning
Languages	English (C1 – Proficient), German (B1 – Intermediate)

Projects

Oil Spill Detection Using SNAP (Microwave & Radar Remote Sensing) View on GitHub

- Built a processing pipeline using ESA SNAP toolbox to detect oil spills from SAR satellite imagery, improving early hazard identification for marine pollution events.

Tree Delineation Using LiDAR-Derived Canopy Height Models View on GitHub

- Used point cloud data AND CHMs to delineate individual trees; created an R package.

Education

M.Sc. Geodesy and Geoinformation Science — TU Berlin, Germany — *2022 – 2025*

Coursework includes: **GeoData Science**, **Deep Learning for Geographical data**, **Geodatabases**, **Geoinformation Science**, **Microwave and Radar Remote Sensing**, **Photogrammetric Computer Vision**

Master's Thesis:Assessing Forest Fire Susceptibility and Its Impact on Biodiversity Using Machine Learning and Climate Projections

- Developed a machine learning model using spatial and climate data to map forest fire susceptibility zones; analyzed biodiversity risk under projected climate scenarios.View on Github

B.Sc. Geoinformatics Engineering — NUST, Pakistan — *2017 – 2021*

Thesis: *In-situ Sensor Based Early Flood Warning System*

Certifications

Tools for Data Science	IBM
Crash Course on Python	Google
Data Analysis with R Programming	Google
Imagery in Action	ESRI