



Sardar Zeeshan Rabbani

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ABOUT ME

I am a passionate GeoInformatics Engineer, dedicated to building innovative WebGIS software, spatial decision support systems and performing spatial analysis to solve real-world challenges. When I'm not coding, I stay active through sports and enjoy contributing to the open-source community, constantly striving to make technology accessible and impactful.

WORK EXPERIENCE

 **PERIEGESIS** – ISLAMABAD, PAKISTAN

FULL STACK GIS DEVELOPER – 01/08/2023 – CURRENT

Geotechnical Borehole Management System:

- Developed a platform for managing borehole and sensor data, with both backend and frontend integration.
- Implemented 3D soil layer visualization and borehole inspection using Three.js and OpenLayers for WMS/WFS and time-based layers.
- Built modules for borehole location, type, routing, location-based search, and Google Street View integration.
- Developed a draft management system for creating, saving, exporting, and importing JSON-based drafts, with custom charting tools (soil charts, scale bars) for millimeter precision and Excel-like functionality.

Solar Market Detection Platform:

- Developed a platform for identifying target service areas using geospatial analysis to optimize solar energy market targeting.
- Integrated rider options directly into interactive maps for enhanced user experience and decision-making.

Custom Map Printing Application:

- Developed a user platform for personalizing maps with text, images, symbols, and marked locations, integrating Mapbox for dynamic customization and high-quality rendering.
- Built a 3D simulation engine using Three.js to preview personalized maps on objects, and implemented an ordering workflow for designing and purchasing map-based products.

 **VOLTQUANT** – REMOTE, PAKISTAN

GIS DEVELOPER (PART-TIME) – 10/01/2024 – 10/12/2024

Energy Distribution and Spatial AI Platform:

- Designed database schemas and deployed GeoServer and Tegola for managing geospatial datasets, WMS/WFS services, and high-performance vector tiling.
- Developed frontend mapping interfaces with MapLibre for advanced visualization and analysis.
- Applied AI + spatial analysis to optimize grid station locations and routing across the UK road network.
- Delivered a geospatial product adopted by Shell for energy distribution planning, integrating OpenAI LLM models for natural language map queries.

 **RAPIDEV** – ISLAMABAD, PAKISTAN

JUNIOR GIS DEVELOPER – 01/11/2022 – 31/07/2023

- Worked on multiple projects integrating **AI and spatial data** for defense and security applications.
- **Battle Management System (BMS):**
 - Displayed real-time sensor data, asset monitoring, and geofencing on a CesiumJS 3D environment.
 - Implemented spatial tools such as measuring tools, line-of-sight analysis, and simulation of battlefield scenarios.
 - Responsible for data requirements gathering, preparation, and backend GIS APIs (e.g., geofencing, spatial queries).



- **AI-enabled Object Detection System:**

- Developed an end-to-end pipeline using high-resolution satellite and drone imagery for military vehicle detection, integrating frontend, backend, AI models, and databases for efficient data flow.
- Designed real-time alert systems with camera feeds for detecting hostile vehicles, geolocating them and implemented socket-based communication for real-time updates and alerts.

🏢 **VISIONTECH360** – RAWALPINDI, PAKISTAN

JUNIOR GIS DEVELOPER – 01/07/2022 – 30/10/2022

- Designed and managed ArcGIS Server for spatial data handling and WMS/WFS/WMTS requests, enabling real-time geospatial operations.
- Developed interactive mapping and situational awareness tools using the ArcGIS JavaScript API, including real-time spatial operations like buffering, querying, and thematic maps.
- Optimized server workflows for fast rendering and scalability, supporting mission-critical, high-security defense projects.

🏢 **GIS PLUST TOTAL SOLUTIONS (PVT.) LTD.** – ISLAMABAD, PAKISTAN

GIS DEVELOPER INTERN – 10/07/2021 – 28/08/2021

- Processed and georeferenced 3D spatial data for integration into CesiumJS 3D terrain, using ogr2ogr, Pandas, and NumPy for data preparation.
- Developed an interactive 3D property management app with ReactJS and CesiumJS, enabling users to buy/sell properties and explore buildings.
- Implemented geospatial analysis features using TurfJS for spatial calculations and operations.
- Managed backend services with Django and PostgreSQL, handling APIs and database operations.

- **EDUCATION AND TRAINING**

10/09/2018 – 10/06/2022 Islamabad, Pakistan

GEOINFORMATICS ENGINEERING National University of Science & Technology

Website <https://igis.nust.edu.pk/> | Final grade 3.76/4

- **SKILLS**

geographic information systems | Spatial Analysis | PSQL-PostGIS | ArcGIS and ERDAS IMAGINE | Geospatial: (Geopandas, Folium, GDAL, Rasterio, xarray, arcpy) | GIS: Esri ArcMap, ArcGIS Pro, ArcGIS Server, QGIS, Geoserver, Mapserver | CesiumJS | WebGIS: OpenLayers, Leaflet | Machine Learning | Full-Stack Development with Javascript (Nodejs + Reactjs) | Python (computer programming) | Back-end (Flask, Django) | Frameworks & Libraries: OpenCV, Sci-kit learn, NumPy, Pandas, SciPy, Matplotlib. | JavaScript / nodejs / ExpressJs / NestJs | Web Designing & Web Development | React, Next.js, React Native | DevOps: AWS, Git. | Platform : AWS Cloud | GIT version control, Linux Command | Databases (MySQL, PostgreSQL, Oracle) | React / React Native / React hooks

- **HOBBIES AND INTERESTS**

Open Source, Coding, and Personal Interests

- **Open Source Development & Contributions**

- Published multiple NPM packages, including both newly built packages from scratch and improvements to existing packages.
- Actively contribute to the open-source community, enhancing the functionality of various tools and libraries.

- **Coding**
- **Cricket**
- **Badminton**
- **Movies**

Links <https://github.com/zeeshan1509> | <https://www.npmjs.com/~zeeshan1509> | <https://www.linkedin.com/in/zeeshan1509/>