Hem Raj Pandey

Fullstack GIS developer/Remote Sensing Engineer

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Experienced GIS developer specializing in Python Django and React for web applications. Skilled in remote sensing, digital image processing, and using tools like Sentinel Hub for satellite imagery analysis. Proficient with geospatial Python libraries and cloud platforms like AWS and Google Cloud.

EXPERIENCE

Full stack web GIS developer/Freelancer
New Delhi, Delhi

Global Coordinate
Feb, 2024 - Present

- Currently contributing to the development of the eTOD Geoportal
- Implemented user authentication via RESTful APIs
- Designed and developed a dynamic dashboard for the eTOD portal utilizing React
- https://gcportal-frontend.vercel.app/

Full Stack web GIS Developer/Freelancer
Remote

Fiveer
Oct, 2023 - Present

- Developed and deployed the GeoDjango backend RESTful API for the Farm Calendar app on Google Cloud Platform (GCP), ensuring scalability and reliability.
- http://surl.li/rzbdz

Full stack web GIS developer/part time
Lalitpur

Mappers Nepal PVT LTD
May, 2023 - Present

- Developed the company site for Mappers Nepal
- Developed Sudurpaschim Province dashboard with GIS-based info visualization.
- https://mappersnepal.com.np/
- https://suderpashchim-school-infowebmap.vercel.app/

Vice President
Pokhara

Geomatics Engineering Students' Association of Nepal (GESAN)
Jul, 2022 - Jul, 2023

- Directed association activities and initiatives in the capacity of Vice President

http://www.ioegesan.org/

EDUCATION

Bachelor in Geomatics Engineering
Pokhara

IOE Pashchimanchal Campus
Aug, 2019 - Present

High School Degree
Mahendranagar

Shree Mahendranagar Secondary School
May, 2017 - Apr, 2019

PROJECTS

Electronic Terrain and Obstacle Data (eTOD) Geoportal: Ongoing project

- The eTOD portal offers access to various electronic terrain and obstacle datasets for different aerodromes.

https://gcportal-frontend.vercel.app/

Web GIS based dashboard for Sudurpashchim Province: Ongoing project

- Enables users to explore aggregate number of educational institutions in Sudurpashchim Province
- Allows filtering based on smaller administrative boundaries like municipalities and wards.
- Clicking on a school marker provides access to comprehensive infographics of the selected school.

https://suderpashchim-school-infowebmap.vercel.app/

FarmCalendar Web GIS app

- Empowers users to query farming regions, soil types, and crop calendars based on coordinates selected from the map interface.
- Facilitates seamless data expansion across countries through user-friendly data upload functionality in the GeoDjango administration interface

http://surl.li/rzbdz

Mappers Nepal website

- Led the creation of a dynamic company website, featuring Home, Team, Portfolio, About Us, Events, Blogs, and Contact sections for improved user interaction and accessibility.

https://mappersnepal.com.np/

Farmero web application

- Developed a location-based web application connecting farmers and buyers, streamlining agricultural product transactions
- Implemented real-time tracking capabilities using Django channels and websockets for enhanced functionality.

https://youtu.be/Hc8aMj7oDQg

Flood Early Warning System (RPD Project)

- Engaged in the IoT project for the Rapid Prototype Development Challenge 2022, utilizing the Sony Spresense microprocessor and QZSS satellite positioning technology.
- Developed a web application providing real-time flood information via a web GIS interface, employing geospatial analysis to track users' locations and suggest safe zones in flood-affected areas.

https://youtu.be/K75A3X-LM0E

Tourism web application

- Modeled after popular ride-sharing platforms like Indrive and Pathoo, the web application enables passengers to create and submit travel plans and send ride requests to available drivers
- Implemented Django channels and websockets to enable real-time ride tracking and handle asynchronous ride requests, ensuring a seamless user experience.

https://github.com/HEM2058/Tourismo_webapp

Digital map for district

- Empowers administrators to upload municipality shape files, utilizing Geoserver for rendering WMS and WFS layers
- Users can visualize uploaded data on an OpenLayers map and request assistance by submitting their details and locations through a relief request option.

https://github.com/HEM2058/Digital_map_Bajhang_Backend/

Resource mapping portal

- Allows users to upload shape files and CSV data containing coordinates for resources like schools, temples, and hospitals
- Visualizes all data on a map with features including search, filtering, and navigation to specific locations using Leaflet plugins and a routing machine.

https://github.com/HEM2058/resource_mapping

Doctor Finder web application

- Facilitates doctor registration, displaying their information on a map for easy access.
- Users can navigate to registered doctors and contact them directly as required. Watch our video tutorial for a comprehensive demonstration.

https://youtu.be/fBX9JlbWeNE

Waternetwork management System(Ongoing final year project)

- Developing a WBGIS application system integrating GIS and network analysis to minimize pipeline length by providing shortest routes.
- Incorporating a messaging feature for users to report water pipeline issues like leaks and facilitating task management for administrators through efficient task division and scheduling.

TRAINING/CERTIFICATIONS

Spatial Data Science: The New Frontier in Analytics   2023

Esri

https://www.esri.com/training/TrainingRecord/Certificate/hemrajpandeyd/64c8b3368a98b258b4d64496/-345

Python for Everyone   2023

Esri

https://www.esri.com/training/TrainingRecord/Certificate/hemrajpandeyd/64c8a7a08a98b258b4d5db49/-345

Introduction to Open Source Web GIS Programming   2022

Udemy

https://www.udemy.com/certificate/UC-cec273cb-d0c8-4422-a884-b9bbddd6f056/

Web Mapping and Web-GIS from Dev to Deployment: GeoDjango   2022

Udemy

https://www.udemy.com/certificate/UC-43e9827f-a7ea-44bf-b49a-f875822678c6/

SKILLS

Python, Django (GeoDjango), Django Rest Framework, React, LeafletJS, openlayers, MapLibre, PostgreSQL/Postgis, Git/GitHub, Javascript, HTML, CSS, geoServer, geonode, OSM tools/apis, AWS CLoud, Google Cloud Platform, Digital Ocean, ArcGIS/ArcGIS pro, SQL, Docker, D3.js, Photogrammetry, Qgis, NetworkX, geopandas, Rastero, GDAL, Shapely, Adobe Photoshop, Adobe InDesign, Adobe Illustrator, Google Earth Engine, Google Earth Pro, ENVI, Satellite Image Processing, Cartography, sentinelhub, Excel, PowerPoint, CICD, GRASS GIS, Websocket, GNSS

LANGUAGE

Nepali, English, Hindi