



HEM RAJ PANDEY

Fullstack web GIS
developer



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Location

Kaski , Pokhara



Website

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+ SUMMARY

I'm a final semester Geomatics Engineering student at IOE Pashchimanchal Campus, Pokhara, Nepal. Since 2022, I've developed over 10 web applications, showcasing expertise in full-stack web and GIS development, along with DevOps tools. Proficient in deploying on Google Cloud Platform and Amazon AWS, I also possess a strong command of geospatial Python libraries (Geopandas, Shapely, NetworkX, GDAL).

+ EDUCATION

Bachelor in Geomatics Engineering

IOE Pashchimanchal Campus / Pokhara / August, 2019 - Present

High School Degree

Shree Mahendranagar Secondary School / Mahendranagar / May, 2017 - April, 2019

+ WORK EXPERIENCE

Freelancer Full Stack Web GIS Developer

Fiveer / Remote / October, 2023 - Present

As a Freelancer Full Stack Web GIS Developer, I specialize in creating dynamic and interactive web GIS applications. With a recent successful completion of a project, I bring hands-on experience in designing, developing, and deploying web GIS solutions.

<https://www.fiverr.com/hempandey819/create-any-gis-maps-do-spatial-analysis-and-gis-programming>

+ SKILLS

- Python
- Django (GeoDjango)
- Django Rest Framework
- React
- LeafletJS
- openlayers
- MapLibre
- PostgreSQL/Postgis
- Git/GitHub
- Javascript
- HTML
- CSS
- geoServer
- geonode
- OSM tools/apis
- AWS CCloud
- Google Cloud Platform
- ArcGIS/ArcGIS pro
- SQL
- Docker
- Remote Sensing
- Photogrammetry
- Qgis
- NetworkX

Full stack web GIS developer

Mappers Nepal PVT LTD / Lalitpur / May, 2023 - Present

I am presently engaged in web and GIS development, with a primary focus on successful deployment of these applications. My work involves creating and optimizing web-based geospatial solutions to address specific needs and ensure efficient functionality.

<https://mappersnepal.com.np/>

Vice President

Geomatics Engineering Students' Association of Nepal (GESAN) / Pokhara / July, 2022 - July, 2023

Leadership role overseeing association activities and initiatives.

<http://www.ioegesan.org/>

- geopandas
- Rasterio
- GDAL
- Shapely
- Adobe Photoshop
- Adobe InDesign
- Adobe Illustrator
- Google Earth Engine
- Google Earth Pro

+ LANGUAGE

+ TRAINING/CERTIFICATION

Spatial Data Science: The New Frontier in Analytics

Esri / 2023

<https://www.esri.com/training/TrainingRecord/Certificate/hemrjapandeyd/64c8b3368a98b258b4d64496/-345>

Python for Everyone

Esri / 2023

<https://www.esri.com/training/TrainingRecord/Certificate/hemrjapandeyd/64c8a7a08a98b258b4d5db49/-345>

Introduction to Open Source Web GIS Programming

Udemy / 2022

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

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

Udemy / 2022

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

- Nepali 
- English 
- Hindi 

+ PORTFOLIO

Web GIS based dashboard for Sudurpashchim Province

This web application enables users to explore the aggregate number of educational institutions in the Sudurpashchim Province. Further details can be filtered based on smaller administrative boundaries, such as municipalities and wards. Clicking on a school marker provides access to the comprehensive infographics of the selected school.

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

FarmCalendar Web GIS app

Developed a GeoDjango-based web GIS app with Google Cloud Platform deployment. Empowers users to query farming regions, soil types, and crop calendars via a user-friendly interface. Seamlessly explores crops and schedules, offering valuable insights into agriculture practices. Versatile data upload feature accommodates any country, showcasing scalability for future expansions.

<https://farm-calendar-frontend.vercel.app/>

Mappers Nepal website

I am proud to have developed and deployed the Mappers Nepal website, utilizing Django as the backend framework.

<https://mappersnepal.com.np/>

Farmero web application

I have developed a location-based web application that connects farmers and buyers, streamlining the process of buying and selling agricultural products. The application includes real-time tracking capabilities implemented using Django channels and websockets for enhanced functionality.

<https://youtu.be/Hc8aMj7oDQg>

Flood Early Warning System (RPD Project)

I participated in the IoT project for the Rapid Prototype Development Challenge 2022. Our project utilized the Sony Spresense microprocessor and QZSS satellite positioning technology. The web application we developed offers real-time flood information through a web GIS interface. It leverages geospatial analysis to continuously track users' real-time locations and provide suggestions for safe zones in flood-affected areas.

<https://youtu.be/K75A3X-LM0E>

Tourism web application

The web application functions similarly to popular ride-sharing platforms like Indrive and Pathoo. Passengers have the capability to create and submit their travel plans, and they can also send ride requests to available drivers. We've implemented Django channels and websockets to enable real-time tracking of rides and handle asynchronous ride requests for a seamless user experience.

https://github.com/HEM2058/Tourismo_webapp

Digital map for district

This program enables administrators to upload a municipality's shape file, utilizing Geoserver to render WMS and WFS layers. Users can view all the uploaded data on an OpenLayers map. Additionally, there is a relief request option that allows users to request assistance by submitting their details and locations.

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

Resource mapping portal

The software enables users to upload shape files and CSV data containing coordinates for various resources like schools, temples, and hospitals. It then visualizes all the data on a map, offering features such as search, filtering, and navigation to specific locations using Leaflet plugins and a routing machine.

https://github.com/HEM2058/resource_mapping

Doctor Finder web application

Our application allows doctors to register, making their information visible on a map for easy access. Users can then navigate to these doctors and contact them as needed. For a more in-depth demonstration, please watch our video tutorial.

<https://youtu.be/fBX9JlbWeNE>

Waternetwork management System(ongoing final year project)

We are currently developing a WBGIS application system that seamlessly integrates GIS and network analysis. Our objective is to minimize pipeline length by providing the shortest routes. The system incorporates a messaging feature for users to report water pipeline issues, such as leaks, and facilitates task management for administrators through effective task division and scheduling.