

SAGAR TIWARI

GEOMATICS ENGINEER

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ABOUT ME

I am a Geomatics Engineer with hands-on experience across land surveying, Geographic Information Systems (GIS), remote sensing, and geospatial data analysis. My fieldwork spans GNSS/GPS, DGPS, RTK, and static GNSS positioning, cadastral and topographical surveying, total station operations, and levelling, complemented by survey camp experience in hydropower feasibility, and road and bridge projects.

Alongside fieldwork, I apply Python, machine learning, and WebGIS development to process, analyse, and communicate geospatial data — most notably through my final year research estimating biomass and carbon stock using satellite imagery and remote sensing techniques. I am committed to applying modern geospatial technologies to surveying, infrastructure planning, environmental monitoring, and spatial decision-making, and I am actively seeking opportunities to contribute to geospatial projects where accurate field data and rigorous analysis drive better outcomes.

EDUCATION

B.E. / Bachelor's Level — Geomatics Engineering

Institute of Engineering, Pashchimanchal Campus (WRC), Pokhara, Nepal

+2 / Higher Secondary Education

Pokhara Aadarsha Secondary School, Pokhara-1, Bagar

FIELD SURVEY EXPERIENCE

Topographical Survey & Mapping Contour mapping, detail survey, DGPS mapping and terrain modelling.	Cadastral Surveying Land parcel measurement, boundary demarcation and cadastral mapping.
GNSS, GPS, DGPS, RTK & Static Survey Positioning and control-survey workflows using GNSS/GPS, DGPS, RTK and static observations.	Road, Bridge & Hydropower Survey Alignment survey, cross-sections, setting out and as-built survey.

18-Day Survey Camp

Hydropower feasibility, cadastral surveying, and GNSS/GPS field operations.

10-Day Survey Camp

Topographic mapping, road, building, and bridge surveys.

SKILLS & INTERESTS

Hard Skills: Geographic Information Systems (ArcGIS, ArcMap), Remote Sensing, Photogrammetry, Web Development (WebGIS), Python (Geospatial Applications), GNSS, Spatial Data Analysis, Cartography, Spatial Data Quality (QA/QC), Technical and Academic Writing

Soft Skills: Leadership, Analytical Problem-Solving, Strategic Planning, Cross-functional Team Coordination, Field Logistics Management

Interests: Earth Observation, Disaster Risk Reduction (DRR), Hydrology, Urban Spatial Planning, Climate Change and Sustainability, Field-based Geospatial Work, Professional Networking and Conferences, Travel and Cultural Exploration (documentation and story mapping)

TOOLS & TECHNOLOGIES

GIS & Remote Sensing: QGIS, ArcGIS, ENVI, Google Earth Engine, Pix4D, StoryMaps, SNAP

Programming Languages: Python, SQL, C, C++, HTML, CSS, JavaScript

Surveying & Mapping: Levelling, Theodolite, UAV, Total Station, GNSS, LiDAR

Others: KoboCollect, OSM Validations, Microsoft Office, Graphic Designing, LaTeX

FEATURED PROJECT

Estimation of Biomass and Carbon Stock in Thotnekhola Community Forest Area Using Remote Sensing, GIS, and Machine Learning Approach

Summary: Estimation of above-ground biomass, carbon stock and CO2 equivalent using Sentinel-2 imagery, vegetation indices, field measurements and Random Forest modelling.

Tools: Google Earth Engine, QGIS/ArcGIS, Python and scikit-learn.

CERTIFICATIONS

- UAV and LiDAR Training — GESAN (2026)
- GIS with Python Libraries Free Certification — Modern GIS (2026)
- QGIS Training — GESAN (2024)
- UI/UX Design and Generative AI Tools Training — NEA (2025)

LANGUAGES

- **Nepali** — Native
- **English** — Professional working proficiency
- **Hindi** — Conversational proficiency

REFERENCES

Available upon request.