

# ABHIK NASKAR

## Geospatial Developer | Analytics & Strategy

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### PROFESSIONAL SUMMARY

GIS professional with 1.5+ years of experience architecting end-to-end spatial solutions across disaster management, urban planning, and environmental monitoring. Delivered geospatial projects spanning 5+ countries, managed spatial databases exceeding 10M+ records, and secured government and academic partnerships across Eastern and North Eastern India. Combines deep technical proficiency in remote sensing, spatial databases, and web GIS with proven business development capabilities.

### CORE COMPETENCIES

GIS & Remote Sensing | Spatial Database Management | Web GIS Development | Geospatial Data Science | Machine Learning for LULC | Business Development | Client Engagement | Geospatial Training & Curriculum Design

### TECHNICAL SKILLS

**GIS & Mapping:** ArcGIS Pro, ArcGIS Online, ArcGIS Map, QGIS, ERDAS IMAGINE, ESA SNAP, Google Earth Engine, Drone2Map, Survey123, QField, GeoServer, Leaflet, Mapbox API

**Programming:** Python, JavaScript, Node.js(basic), HTML, CSS

**Databases:** PostgreSQL / PostGIS, Neo4j

**Visualization:** ArcGIS Dashboard, Power BI, QGIS2Web, Python Dash

**Business Development:** CRM Systems, Technical Proposals, Market Research, Client Engagement, Training Curriculum Design

### PROFESSIONAL EXPERIENCE

**Business Development Executive** | *Avakaza Geoscience Research Technologies* | Bangalore, KA , Mar 2025 – Present

- Spearhead business development initiatives targeting 40+ government agencies and universities across Eastern and North Eastern India, contributing to ~28% growth in client pipeline within the first year.
- Conduct market research across urban analytics, forestry, and drone mapping sectors, identifying 15+ viable project opportunities per quarter.
- Design and deliver geospatial training curriculum for university partnerships & AGSRT's training covering automation, programming, and spatial database management; onboarded 3 institutional clients to date.
- Develop custom geospatial dashboards as GIS Developer, reducing client reporting turnaround by an estimated 40% through workflow automation.
- Manage a CRM pipeline of 3+ active leads, tracking conversion metrics and delivering technical presentations to C-suite and government stakeholders.

**GIS Cartographer** | *NielsenIQ* | Vadodara, GJ, Jul 2024 – Jan 2025

- Engineered high-quality cartographic outputs for 5 multi-country projects spanning Romania, Uzbekistan, Thailand, Tanzania, and India, meeting 100% of delivery deadlines.
- Created and maintained Primary and Secondary Sampling Unit (PSU/SSU) spatial datasets supporting statistical sampling methodologies across diverse regional geographies.
- Established rigorous QA/QC protocols that reduced rework rates by ~25%, ensuring compliance with international project specifications.
- Collaborated across time zones with international teams to deliver spatial data products consistently on schedule.

**Engineering Intern – Data Science & GIS** | *Xpressbees* | Pune, MH, Feb 2024 – Jul 2024

- Analysed and transformed 10M+ GPS trajectory records from logistics operations using Python (Pandas, NumPy), optimising route efficiency and cutting processing time by 35%.
- Engineered automated data-cleaning pipelines that reduced manual intervention by 80% and standardised address parsing across 500K+ unstructured delivery records.
- Administered enterprise PostgreSQL/PostGIS spatial database; query optimisation efforts improved geospatial retrieval speeds by ~50%.

- Leveraged Neo4j graph database for last-mile delivery network analysis, uncovering 12+ route optimisation opportunities across key delivery corridors.

#### **Remote Sensing & Environmental GIS Intern | IIEST Shibpur | Howrah, WB, Mar 2023 – May 2023**

- Conducted soil moisture estimation research using Sentinel-1 SAR data, applying radiometric calibration and Lee speckle filtering within ESA SNAP to produce spatially consistent moisture maps.
- Achieved >85% accuracy in satellite-derived soil moisture estimates validated against in-situ field measurements, demonstrating applicability for precision agriculture decision-support.

### **KEY PROJECTS & ACHIEVEMENTS**

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#### **Ward-Level Flood Evacuation Advisory System — Kolkata Municipal Corporation (prototype)**

- Architected an end-to-end operational web dashboard (Node.js + PostgreSQL backend) integrating real-time GPM rainfall data and Sentinel-1 SAR flood extents, achieving a 90-minute advisory response latency.
- Developed a citizen geo-reporting app and implemented a composite vulnerability-scoring algorithm with mathematically weighted inputs, automating evacuation advisories across 144 municipal wards.
- Deployed GeoServer + Leaflet API for real-time map visualisation with a duty-officer sign-off mechanism ensuring fully auditable decision-making.

#### **Advanced Flood Hazard Mapping — Kamrup Metropolitan District (Academic Project)**

- Built a multi-temporal Sentinel-1 SAR flood-mapping framework in Google Earth Engine, refining classification accuracy using Sentinel-2 NDWI/MNDWI/SWIR indices.
- Performed socio-spatial analysis using nighttime lights, settlement expansion data, and census layers to quantify population displacement across flood-affected zones.

#### **ML-Based Land Cover Classification — Tokyo, Japan (Academic Project)**

- Benchmarked Decision Tree, Random Forest, and SVM algorithms for LULC classification; Random Forest achieved highest overall accuracy at 91.4%, outperforming baseline by 8 percentage points.

#### **Asset Mapping of Symbiosis Lavale Campus Using Drone Data — Academic Project**

- Generated sub-5 cm accuracy orthomosaics, DSMs, and 3-D point clouds from UAV imagery via Drone2Map; digitised 200+ campus assets (buildings, roads, vegetation, infrastructure) in ArcGIS.

#### **Land Subsidence Monitoring – Underground Coal Mining — Paschim Bardhaman (Academic Project)**

- Detected and mapped ground displacement using Sentinel-1 InSAR interferometry, identifying subsidence hotspots of up to 12 cm displacement to support regional risk assessment and planning.

#### **Urban Encroachment Analysis — Eastern Kolkata Wetlands (Academic Project)**

- Quantified ~18% wetland shrinkage over a 15-year period using multi-temporal imagery and MOLUSCE plugin; modelled future land-cover transitions to inform conservation policy.

#### **Forest Cover Change & Climatic Variability — Western Ghats (Academic Project)**

- Investigated forest cover dynamics and wildland fire frequency (2001–2015), correlating long-term climate drivers with spatial fire patterns across multiple landscape scales.

### **EDUCATION**

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#### **M.Sc. in Geoinformatics Aug 2022 – Jun 2024**

Symbiosis Institute of Geoinformatics, Pune

#### **B.Sc. (Hons.) in Geography Jul 2019 – Jun 2022**

Vidyasagar Metropolitan College, University of Calcutta, Kolkata

### **CERTIFICATIONS & TRAINING**

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- Diploma in Remote Sensing, GIS & GNSS – Computer and Skill India Development Mission (CSIDM), 2022
- NASA Applied Remote Sensing Training – Mangroves, Urban Heat Islands & Black Marble Night Lights, 2020
- Value-Added Certificate in Drone Technology & Symposium on Drones in Geospatial Applications, 2023

### **ADDITIONAL INFORMATION**

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**Languages:** English · Hindi · Bengali