Abhik Naskar

GIS Developer & Trainer | GeoAI Practitioner | Solutions & Pre-Sales Specialist

Bangalore, KA | +91-91236 90150 | abhikhzs15@gmail.com | linkedin.com/in/abhik-naskar | abhikn15.github.io/portfolio

PROFESSIONAL SUMMARY

GIS Developer, GeoAI Practitioner, and Technical Trainer with 2+ years of cross-functional experience spanning geospatial system development, machine learning for Earth observation, institutional training delivery, and client-facing business development. Demonstrated ability to work across the full geospatial value chain — from architecting production-grade spatial platforms and building end-to-end GeoAI pipelines, to designing structured training curricula and engaging government and enterprise stakeholders with technical proposals and solution presentations. Hands-on expertise across ArcGIS Pro, Google Earth Engine, Sentinel-1/2 SAR, Python GIS, PostGIS, PyTorch, and SHAP-driven explainable AI — applied across urban flood intelligence, agricultural remote sensing, land cover change detection, and logistics spatial analytics. Equally comfortable operating as a technical individual contributor, a structured trainer for diverse audiences, and a pre-sales consultant translating complex geospatial capabilities into measurable institutional value.

CORE COMPETENCIES

GIS Technical Training & Curriculum Design • ArcGIS Pro & ArcGIS Online • Google Earth Engine
Remote Sensing & SAR Analysis • GeoAI & Deep Learning for Imagery • Python GIS Automation
Solutions Pre-Sales & Technical Proposals • Institutional & Government Client Engagement • PostGIS & Spatial Databases
Flood Hazard & Agricultural Remote Sensing • LULC Classification & Change Detection • SHAP Explainability • Utility Network Management (Electric Domain)

TECHNICAL SKILLS

GIS & Mapping: ArcGIS Pro, ArcGIS Online, QGIS, ERDAS IMAGINE, ESA SNAP, Google Earth Engine, GeoServer, Leaflet
Programming: Python (GeoPandas, Shapely, Rasterio, ArcPy), JavaScript, Node.js, HTML/CSS
Deep Learning & ML: PyTorch, DeepForest CNN, CNN-MLP Hybrid, Random Forest, SVM, Decision Tree, SHAP Explainability, Cohen's Kappa
Databases: PostgreSQL / PostGIS, Neo4j
Visualisation & BI: ArcGIS Dashboard, Power BI, QGIS2Web, Python Dash
EO & Spectral: Sentinel-1 SAR, Sentinel-2 Multispectral, NDVI/NDMI time-series, InSAR, spectral feature interpretation, hyperspectral fundamentals

PROFESSIONAL EXPERIENCE

Trainer & Project Coordinator | **Avakaza Geoscience Research Technologies (AGSRT)** *Mar 2025 – Present*
Bengaluru, KA | Started as Business Development Executive — designation evolved to Trainer & Project Coordinator (Jun 2026)

GIS Training Delivery

- Design and deliver structured GIS training sessions covering ArcGIS Pro, Google Earth Engine, Python GIS automation, PostGIS, remote sensing workflows, and BI tools — for university, government, and enterprise audiences.
- Conduct tech talks, seminars, and geospatial awareness sessions — translating advanced technical concepts into accessible, practical learning outcomes across varied learner levels.
- Develop training syllabi, course frameworks, assessment structures, and educational content tailored to undergraduate students, working GIS professionals, and government officers.

GIS Technical Delivery & GeoAI Development

- Designed and deployed agriculture-focused geospatial dashboards using Google Earth Engine, Sentinel-1/2, NDVI/NDMI time-series, SAR fallback logic, anomaly detection, and crop suitability models for client-facing platforms.
- Built end-to-end GeoAI pipelines for tree canopy detection (DeepForest/PyTorch), building footprint extraction (ArcGIS Pro Deep Learning), and CA-Markov LULC future forecasting — delivering georeferenced GeoPackage outputs for planning deliverables.

Project Coordination & Outreach

- Coordinate ongoing GIS and GeoAI project deliverables — managing task allocation, documentation, reporting, and cross-team communication for smooth execution.
- Support product and project outreach — communicating company services, training programmes, and geospatial solutions professionally to prospective institutional and government clients.
- Assist in lead generation, follow-up activities, and internal team coordination for business development pipeline management.

Business Development

- Led market development across Eastern and North Eastern India — built a 100+ organisation educational and government lead database for Odisha from zero company footprint.
- Delivered customised technical proposals and presentations to institutional and government stakeholders, translating geospatial capabilities into training and project value propositions.

GIS Cartographer | NielsenIQ *Jul 2024 – Jan 2025*

Vadodara, Gujarat

- Produced cartographic and spatial data outputs for projects across Romania, Uzbekistan, Thailand, Tanzania, and India — maintaining project specifications and international delivery timelines.
- Created and maintained PSU/SSU spatial datasets for statistical sampling workflows; applied QA/QC checks for geometry, attributes, boundaries, layouts, and data accuracy.

Engineering Intern — Data Science & GIS | Xpressbees (BusyBees Logistics) *Feb 2024 – Jul 2024*

Pune, Maharashtra

- Analysed 10M+ GPS trajectory and logistics records using Python and geospatial methods for route efficiency, hub allocation, and last-mile delivery analysis.
- Conducted hub location allocation for Pune, Bangalore, Chennai, and Kolkata; supported PostgreSQL/PostGIS data workflows and graph/network analysis using Neo4j concepts.

Remote Sensing & Environmental GIS Intern | IIEST Shibpur *Mar 2023 – May 2023*

Howrah, West Bengal

- Conducted Sentinel-1 SAR-based soil moisture estimation using ESA SNAP preprocessing — including radiometric calibration, Lee speckle filtering, terrain correction, and backscatter interpretation.
- Compared satellite-derived outputs with field observations for environmental and agricultural monitoring and decision-support use cases.

KEY TECHNICAL PROJECTS

Urban Flood Intelligence & Evacuation Decision Platform *Research | MVP Project*

- Architected a real-time, human-supervised flood advisory ecosystem covering 144 metropolitan wards, integrating Sentinel-1 SAR, GPM IMERG, terrain and hydraulic vulnerability layers via five-phase SOP-X v1.2 composite scoring engine.
- Engineered three governance layers: Intelligence Engine (GeoServer WMS/WFS, SHA256 audit packets), Officer Decision Dashboard (Approve/Reject/Escalate, immutable audit trail), and Citizen PWA (OTP auth, GPS geo-tagged reporting, live WMS alert map).
- Trained Random Forest ML module on 576 ward-events across 4 monsoon years — F1-Score 93.4% with SHAP explainability and 4-fold event-based cross-validation.
- Stack: Python, scikit-learn, SHAP, GeoServer, Node.js, Leaflet.js, Sentinel-1, GPM IMERG..

Tamara Valley AgriTwin — Google Earth Engine Dashboard *Client PoC*

- Built a fully published GEE application with Sentinel-2, SAR fallback, CHIRPS rainfall, ERA5 temperature, and 9 seasonal intelligence layers (NDVI, NDMI, BSI, Crop Yield Potential, Drought Risk, Farm Planning Zones).
- Designed dual-layer visualisation with KPI cards, field-click diagnostics, interactive legends, and trend charts — delivered as a live client-facing PoC.

Advanced Flood Hazard Mapping — Kamrup Metropolitan *GEE Research*

- Fused multi-temporal Sentinel-1 SAR with Sentinel-2 NDWI/MNDWI/SWIR indices in GEE; conducted satellite-driven socio-spatial migration analysis using census, nighttime lights, and LULC data.

Land Subsidence Mapping — Paschim Bardhaman (Sentinel-1 InSAR) *Symbiosis Institute of Geoinformatics*

- Detected ground displacement in coal mining zones using Sentinel-1 SAR interferometry; produced calibrated subsidence maps in ArcGIS for geohazard risk assessment.

Comparative ML Classification for Land Cover *Symbiosis Institute of Geoinformatics*

- Evaluated Decision Tree, Random Forest, and SVM for LULC classification; full accuracy assessment and visualised change detection maps.

EDUCATION

M.Sc. in Geoinformatics | **Symbiosis Institute of Geoinformatics, Pune** *Aug 2022 – Jun 2024*

B.Sc. (Hons.) in Geography | **Vidyasagar Metropolitan College, University of Calcutta, Kolkata** *Jul 2019 – Jun 2022*

CERTIFICATIONS & TRAINING

- Crop Yield Estimation using Remote Sensing and GIS — Udemy (Crop Yield Modelling, Crop Type Classification, Wheat Yield Estimation, NDVI, Agricultural GIS)
- NASA ARSET — Satellite Remote Sensing for Urban Heat Islands
- NASA ARSET — Introduction to Black Marble Night Lights Data
- NASA ARSET — Remote Sensing for Mangroves and UN SDGs
- Diploma in Remote Sensing, GIS & GNSS — Computer and Skill India Development Mission (CSIDM), 2022
- Value-Added Certificate in Drone Technology & Symposium on Drones in Geospatial Applications, 2023

LANGUAGES

English (Full Professional) • Bengali (Native) • Hindi (Full Professional)