Jyoti

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Professional Summary

Detail-oriented and results-driven GIS and Remote Sensing Specialist with over 5+ years of progressive experience in geospatial analysis, climate data processing, and project coordination across environmental, urban planning, and market strategy domains. Proven expertise in leveraging tools such as Google Earth Engine, ArcGIS, QGIS, and Python to deliver high-impact spatial insights. Demonstrated ability to lead cross-functional teams, mentor interns, and support strategic decision-making through data-driven geospatial solutions. Adept at managing complex datasets, automating workflows, and contributing to climate action plans, urban heat mapping, and air quality assessments. Passionate about applying geospatial intelligence to solve real-world challenges and support sustainable development goals.

Work Experience

World Resources Institute, India **April 2024 – Present**

Senior Program Associate *Delhi, India*

- Spearheading cross-functional communication and coordination for GIS-driven air quality initiatives, ensuring alignment across technical and policy teams.
- Supporting leadership in the planning and execution of construction and demolition waste management strategies in Chennai and Gurugram.
- Delivering cross-team technical support on GIS and remote sensing tools, enhancing analytical capabilities and ensuring consistent application of geospatial methodologies across projects.

World Resources Institute, India **September 2021 – March 2024**

Program Associate *Bengaluru, India*

- Conducted advanced remote sensing and GIS analysis to support the Tamil Nadu Heat Mitigation Strategy, contributing to data-driven urban climate resilience planning.
- Led internal training sessions on automating geospatial workflows using Google Earth Engine, enhancing team efficiency and technical capacity.
- Designed and produced thematic maps for environmental and social awareness campaigns (e.g., World Earth Day, World Rivers Day, World Habitat Day), amplifying outreach through LinkedIn and X (formerly Twitter).
- Mentored a Google Summer of Earth Engine intern, guiding the extraction of India's coastline using satellite imagery and ground-truth validation techniques.
- Analyzed CMIP5 climate projections and documented spatial trends for Bengaluru, Chhatrapati Sambhajinagar, Nashik, and Solapur, informing their respective Climate Action Plans.
- Authored the Urban Heat Analysis section for Chhatrapati Sambhajinagar's Climate Action Plan, integrating geospatial insights into policy recommendations.
- Supported the Mumbai Vulnerability Assessment by mapping land surface temperature and travel times to critical public services such as hospitals and fire stations.
- Performed and authored Urban Heat Island (UHI) analysis for Bhubaneswar, Coimbatore, and Kochi, contributing to national-level heat resilience strategies.

X, Alphabet (part-time) **August 2023 – March 2025**

GIS Analyst *Remote*

- Supported the Market Strategy team in identifying optimal site locations using advanced remote sensing techniques and spatial analysis.
- Developed and automated geospatial workflows using Google Earth Engine and Python, streamlining data processing and enhancing decision-making efficiency across teams.

X, Alphabet (part-time) **July 2021 – June 2023**

GIS Analyst *Remote*

- Contributed to market sizing analysis by leveraging remote sensing and GIS tools to assess spatial patterns and identify high-potential regions for product deployment.
- Conducted in-depth research on open-source geospatial datasets to derive atmospheric visibility metrics across diverse geographic regions, supporting data-driven strategic planning.

International Center for Agricultural Research in Dry Areas (part-time) **March 2021 – June 2021**

Climate Analytics Consultant *Remote*

- Aggregated and processed CMIP5 NEX-GDDP climate projections using Google Earth Engine.
- Developed a custom Earth Engine application to enable time-series visualization and export of downscaled climate data.

World Resources Institute, India **August 2020 – August 2021**
Consultant *Remote*

- Provided geospatial and remote sensing support across multiple ongoing projects, contributing to spatial data analysis, map production, and environmental research initiatives.

Risk Management Solutions, India **July 2019 – March 2020**
Intern *Noida, India*

- Developed a comprehensive internal tool for the Model Specialists team to streamline client query resolution and improve operational efficiency.
- Collaborated with the remote sensing team to design a semi-automated framework for extracting built-up area characteristics from satellite imagery.

World Resources Institute, India **May 2019 – July 2019**
Google Summer of Earth Engine Intern *Bengaluru, India*

- Conducted temporal analysis of Total Suspended Solids (TSS) in the Ganges River using Google Earth Engine, supporting water quality monitoring and environmental reporting.

Education

National Institute of Technology **2018 – 2020**
Master of Technology in Remote Sensing and GIS *Surathkal, Karnataka, India*

Institute of Engineering Technology **2014 – 2018**
Bachelor of Technology in Civil Engineering *Lucknow, Uttar Pradesh, India*

Technical Skills

Remote sensing and GIS tools: QGIS, ArcGIS Pro, ERDAS Imagine, SNAP, PolSAR
Programming and automation: Python, Google Earth Engine
Data Management: Metadata creation, spatial data validation, spatial data quality assessment and quality check
Artificial Intelligence (AI) prompt engineering

Licenses and Certifications

- Certificate of Completion for PyQGIS Masterclass – SpatialThoughts
- Certificate of Completion for Advanced QGIS – SpatialThoughts
- Certificate of Appreciation for Best Thesis Awards (Kerala Chapter) 2020 – IEEE-GRSS
- Health GIS: Geoinformatics for COVID-19 – IIRS
- Machine Learning with TensorFlow on Google Cloud Platform Specialization – Coursera
- TensorFlow in Practice Specialization – Coursera
- SAR for Landcover Applications – NASA
- SAR for Disasters and Hydrological Applications – NASA