

# Krutiben Mehta

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## Summary

- Experienced Geospatial Analyst with 3+ years of experience in GIS, Remote Sensing, and Geospatial Analysis.
- Proficient in using software such as ERDAS Imagine, Envi, ArcGIS Pro, and QGIS for visual interpretation, time series analysis, and satellite imagery analysis.
- Expertise in collecting, managing, and processing large-scale datasets using GIS software and database management.
- Successfully spearheaded projects related to Spatio-Temporal analyses and performed spatial databases analyses using remote sensing with raster and vector datasets.
- Strong research acumen, with publications in peer-reviewed journals and expertise in scientific technical report writing techniques and presentations.
- Committed to delivering high-quality work and fostering a positive learning environment.
- Currently, working on Google Street View data and developing hybrid models applying Deep learning, GIS, and Geomatics to quantify urban perception.

## Skills & Interests

**Technical Knowledge:** ArcGIS Pro, QGIS, Envi, MATLAB, ArcMap, ERDAS Imagine, Analysis of Geo-Spatial data, Active Microwave Sensor image data, SAR, Scatterometer and optical Satellite data, Geophysical data QA QC, Digital Elevation Models, Cartography, GIS, GPS Data

**Skills:** MS Excel, MS PowerPoint, MS Word, MS Projects, Data Collection, Data Analysis, Data Visualization, Imagery Analysis, Machine learning, Python, R, SQL

**Soft Skills:** Communication, Teamwork, Problem-Solving, Critical Thinking, Conflict-Resolution, Organizational Skills, Time Management, Multitasking

## Work Experience

### University of Ottawa, ON — Teaching Assistant

Sept 2022 – Present

Ottawa, ON |

- Facilitated academic learning and provided a comprehensive understanding of GIS & The Digital Earth, and Biogeography subjects by delivering 45 lectures & conducting 32 practical sessions to 210 students across 4 classes
- Spearheaded practical lab sessions by guiding 65 students to improve GIS skills and complete 11 online learning courses on GIS from ArcGIS Pro from ESRI Academy
- Boosted the research capabilities of the institute and opportunities for students by 40% by performing spatial databases analyses with Geographic Information Systems with raster and vector datasets for city of Ottawa projects
- Enhanced pedagogical capabilities & quality of teaching for 4 subjects at the undergraduate level by 30% through developing tutorials & designing a range of teaching and assessment activities to improve lesson delivery
- Expanded course curriculum by 20% for 2 subjects through developing new teaching material with appropriate content and delivery methods in collaboration with a multidisciplinary team to ensure course objectives are met
- Headed the assessment process and increased its effectiveness to support student learning by 30% by evaluating using GIS methods and techniques in line with university standards and providing timely and appropriate feedback

### Space Applications Center, SAC-ISRO, India — Geospatial Analyst

Jun 2017 – Jun 2020

Ahmedabad, India |

- Demonstrated expertise in using GIS software and Database Management by applying them practically to collect, manage and process large-scale scatterometer datasets of the Polar region in order to build a large dataset
- Boosted capabilities and data accuracy Remote sensing web-based applications by building large datasets from various sources, transforming them into spatial data, and incorporating them into the applications
- Headed project on Spatio-Temporal Analyses on polar region and performed spatial databases analyses using

## Geographic Information Systems and remote sensing with raster and vector datasets

- Achieved 100% of assigned development goals by updating and maintaining geodatabases, creating 3 workflows, and publishing 3 datasets and data management decisions
- Reduced project delivery time by 25% through developing operational programming model for Machine Learning classification data models, scripts, & strategies to generate classified images for ROI segmentation and inference
- Identified and reduced anomalies of the event catalog by 30% by performing the Quality assurance (QA) procedure and provided regulatory monitoring feedback on the data analysis models and performance
- Prepared 360 high-quality resource information maps by combining Earth observation satellite data products in a hierarchical decision rule-based system, & using scientific technical report writing techniques & presentations
- Coordinated with peers and worked collaboratively for senior, agile, best-practices system management to improve analysis tools by 40%, validate bug fixes issues & applied design changes, and implement recommendations in a fast-paced environment
- Developed 3 strategic and technically innovative solutions by leveraging analytical skills and geospatial techniques and produced accurate reports for communicating effectively with internal and external clients
- Written and executed 2 SQL scripts to fulfill relational database RDBMS data management requirements timely

### **Institute of Technology, Nirma University — Sessional Instructor**

#### **L.D. College of Engineering — Sessional Instructor**

Jan 2014 – Dec 2015

Ahmedabad, India |

- Delivered 210 lessons for 6 courses on graduate-level Mathematics and increased student engagement and classroom participation by 80% through using advanced pedagogical techniques
- Enhanced curriculum effectiveness by 40% through developing new material for Mathematics courses, preparing application-based assignments, and designing practical activities aimed at problem-solving and self-development
- Demonstrated superior research and analytical capabilities, and established departmental leadership on 4 Computer Science, Information Technology, and GPS Data projects
- Mentored and supported 230 students in designing large-scale student-driven projects, assisted in developing their project management and organizational skills, and prepared weekly reports on project progress for the principal investigator through comprehensive reporting
- Improved operational efficiency by 90% through maintenance of detailed and accurate student records, and documentation for student projects including plans, reports, project artifacts, and tests
- Actively participated in departmental meetings, statistical programs, and training programs and worked cross-functionally to assist in completion of departmental administrative tasks

## Education

### **University of Ottawa, Ontario**

Ph.D. Geography

Present

### **Gujarat University**

Master of Science (M. Sc.) Mathematics

Jun 2013

### **Gujarat University**

Bachelor of Science (B. Sc.) Mathematics

Jun 2011

### **Gujarat University**

Diploma in Geographic Information Systems

Jul 2011

**Concentration 1:** Geographical Information Systems, Remote sensing **Concentration 2:** Mathematics

**Courses:** Spatial Data Analysis, Environmental Data Analysis and Modeling, Selected Topics in Human Geography: Theoretical Approaches and Methodological Debates, Linear Algebra, Complex Analysis, Calculus

## Publications

Kruti Upadhyay, Bhasha H. Vachharajani, D. Ram Rajak, “Deriving Sea Ice Images from Super-Resolution SCATSAT-1 Data over the Antarctic: Operational Method and Accuracy Assessment” Journal of the Indian Society of Remote Sensing, Volume 49 (10), pp 2575–2581, 2021.

## Certifications/Web courses

### **ArcGIS Pro Basics**

ESRI

Feb 2022

### **Foundations of Geographic Information Systems (GIS)**

LinkedIn Learning

Jan 2022

### **Advanced Predictive Capability of Northern Hemisphere Weather and Climate**

APECS-APPLICATE-YOPP

Nov 2019

### **Cryospheric Applications using Space-Based Observations**

TREES, SAC-ISRO

Aug 2017

### **Discovery and Use of Operational Ocean Data Products and Services**

Unesco/IOC IODE and INCOIS

Mar 2017

### **Indian Ocean Currents: Data, Processing and Applications**

ITCOcean and INCOIS

Jan 2016