UDIT ASOPA

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PROFESSIONAL SUMMARY

Data Analyst and Remote Sensing Engineer with 5+ years of experience analyzing large datasets, building data pipelines, and applying statistical and geospatial models for environmental and industrial insights. Proficient in Python, pandas, and scikit-learn, with hands-on exposure to time series analysis, remote sensing, and machine learning. Experienced in designing scalable workflows for monitoring, forecasting, and change detection. Enthusiastic about solving real-world industrial challenges through data science, with growing experience in cloud platforms and MLOps practices.

WORK EXPERIENCE

Data Analyst / Remote Sensing Engineer (official title: SAR Remote Sensing Engineer) *@ ICEYE Oy, Espoo Finland* **Dec 2021 – Present**

- Lead analysis and processing of SAR (Synthetic Aperture Radar) satellite data for environmental monitoring, disaster response, and change detection
- Designed and optimized data workflows for wind damage detection, wildfire impact assessment, and other geospatial intelligence products
- Applied statistical models to monitor long-term environmental trends and support product development
- Contributed to operational products in wind damage and wildfire monitoring, bridging analytics and software implementation
- Generated data-driven visualizations and spatial reports using Python and GIS tools to guide business decisions

Freelance Geospatial Data Analyst *@ Self Employed, Delft Netherlands* **April 2021 – November 2021**

- Designed and deployed Earth Engine apps and dashboards for real-time disaster monitoring and environmental change tracking and trend detection
- Delivered interactive visualization tools and map-based insights for climate and urban change use cases
- Conducted spatial analysis of forest degradation, urban expansion, and aquatic health metrics using Earth Observation data

Remote Sensing & GIS Researcher *@ Delft University of Technology, Delft Netherlands* **April 2020 – March 2021**

- Developed scalable cloud-based pipelines (Python & Bash) for processing geospatial time series data
- Mentored peer researchers and documented robust methodologies to ensure transparency and reproducibility

Junior Remote Sensing & GIS Research Fellow *@ Indian Institute of Technology, Mumbai, India* **Sept 2019 – February 2020**

- Processed SAR data for glaciology research and conducted supervised classification for change mapping
- Coordinated logistics and data acquisition for a high-altitude snow survey campaign in the Himalayas

EDUCATION

Master of Engineering (M. Eng.) in (Remote Sensing and GIS)
Indian Institute of Remote Sensing, Dehradun, India, Aug 2017 – Jul 2019
Published peer-reviewed research in international journals and conferences

Post-Graduation Diploma (PGD) in (Embedded System & Informatics)
Centre for Development of Advanced Computing, India, Aug 2016 – Jan 2017
Specialization in IoT, Geo-Informatics, and Health Informatics

Bachelor of Engineering (B. Eng.) in (Electronics Engineering)
Rajasthan Technical University, India, Aug 2011 – Aug 2016
Focus on Embedded Systems, IoT Applications, and Electronic Circuit Design

SCIENTIFIC COMNTRIBUTION

- AGU fall meeting (2020) agu.confex.com/agu/fm20/Paper/754443
- Advances in Space Research (2021) doi.org/10.1016/j.asr.2021.02.023
- Songklanakarin Journal of Science and Technology (2022) doi.org/10.14456/sjst-psu.2022.135
- Earth and Space Science (2020) doi.org/10.1029/2020EA001230
- UASG, India (2019) doi.org/10.1007/978-3-030-37393-1_28
- 2nd IECG, MDPI (2019) doi.org/10.3390/IECG2019-06230
- ISPRS, India (2018) doi.org/10.5194/isprs-annals-IV-5-245-2018

PROFESSIONAL SKILLS

Analytical thinking & structured problem-solving, Cross-functional collaboration & team coordination, Process improvement & automation mindset, Effective communicator across technical and non-technical teams, Fast learner, curiosity-driven, and detail-oriented

TECHNICAL SKILLS

Programming & Analysis: Python (pandas, numpy, scikit-learn, matplotlib, seaborn), Jupyter Notebooks, SQL (basic), Bash scripting
Machine Learning & Data Science: Supervised learning (regression, classification), Time Series Analysis, Model evaluation, Exploratory Data Analysis (EDA)
Data Engineering & MLOps: ETL workflows (Python-based), Version control (Git), Basic understanding of CI/CD and model deployment
Geospatial & Remote Sensing: SAR and optical satellite data processing, QGIS, ArcGIS, Google Earth Engine
Cloud & Tools: AWS, Google Cloud Platform (basic), Git, Power BI

SOFT SKILLS

Stakeholder communication and engagement, Collaborative mindset in cross-disciplinary teams, Fast turnaround on problem-solving, Clear documentation and reporting, Adaptive in multicultural environments