Omkar Jadhav

Geo-Data Scientist

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About me:

GeoData Scientist with 2 years' experience in statistical modeling, machine learning, and data analysis, specializing in the geospatial domain. Skilled in Python and SQL to deliver actionable insights, develop predictive models, and enable scalable solutions on cloud platforms. Strong track record in data visualization, algorithm development, and effective collaboration across teams to enhance operational efficiency and support data-driven decisions

Professional Experience:

Dec 2023- Jul 2025

Senior Research Fellow (Remote Sensing & GIS)

World Bank aided NHP/ Mahatma Phule Agriculture University, (Pune, India)

- Developed and refined GIS-based automation and mapping tools to increase workflow efficiency and reduce manual spatial data processing for sustainability and irrigation projects
- Delivered high-quality GIS outputs including project feasibility and reporting tools, curated spatial and tabular data, and technical documentation ensuring timely task completion and user satisfaction
- Led mapping and analysis for project areas, defining boundaries, exclusion/estimation areas, and supporting compliance with regulatory protocols
- Provided timely support and troubleshooting of mapping tools, maintaining strong user satisfaction

Jul 2024 – Aug 2025

Course Co-Ordinator (RS & GIS Training Program)

- Delivered training in best practice spatial data management, automation, and GIS tool usage for technical teams
- Developed procedures for efficient tracking of project data and mapped improvements for process delivery and compliance

Jun 2023- Nov 2023

GIS & Monitoring, Evaluation, Learning Consultant (Freelance)

Samerth Charitable Trust, India | Commonland Foundation, Netherlands

- Conducted GIS analysis and environmental impact evaluations for NGOs, contributing key data to tender proposals and reports
- Collaborated with international conservation partners to ensure spatial and tabular data quality and utility

Education:

Oct 2020- Oct 2023

M.Sc. in Geoinformatics

Faculty of ITC- University of Twente, Netherlands Joint with IIRS- India Space Research Organization, India

Key Skills:

GIS Software

ArcGIS Pro, ArcGIS Online, ArcGIS Enterprise, QGIS, Google Earth Engine, ERDAS

Programming & Automation

Python (ArcPy, GeoPandas, GDAL), R, JavaScript, SQL

Data Analysis & Visualization

Pandas, Numpy, Matplotlib, Seaborn, PowerBI

Database Management

PostgreSQL, PostGIS, MongoDB

Machine Learning & Deep Learning

scikit-learn, TensorFlow, PyTorch/ Keras, OpenCV, U-Net, YOLOv5

Version Control
Git, Github

Projects Undertaken:

- Developed automated semantic segmentation pipeline with U-Net to classify diverse imagery for environmental monitoring.
- Produced air quality and carbon trend reports using geospatial modelling, supporting project feasibility and regulatory compliance. (Python, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, ArcGIS Pro)
- Led classification of environmental features and land cover using advanced remote sensing and machine learning (Remote Sensing, GIS, deep learning, python, satellite image processing)
- Applied Random Forest and Support Vector Machine algorithms to classify crop stages and estimate biophysical parameters
- Designed and deployed object detection models (YOLOv5) for environmental feature mapping integrated with GIS
- Conducted an in-depth analysis of crop water stress in the Hoshiarpur District of Punjab using Sentinel-1 SAR dataset and Landsat-8 optical imagery
- Estimated the Crop Cover (C- factor) of the RUSLE model for soil erosion assessment using Google Earth Engine (Hydrology, Soil Conservation, Google Earth Engine)
- Prepared a digitized soil map utilizing the machine learning method (Soil Science, Machine learning, Regression)

Publications:

- **Jadhav, O. A.**, Gharat, T. V, Pathave, J. C., & Nikam, V. V. (2019). ***Comparative Analysis of Digital Elevation Models: A Case Study of Kayadhu Watershedle***. *Asian Journal For Convergence In Technology (AJCT) ISSN -2350-1146*, *4*(3 SE-Article). https://www.asianssr.org/index.php/ajct/article/view/829
- **Jadhav, O. A.**, Bathe, Ishwar, ***Kumbh Mela: A Catalyst of land use land cover change in Nashik region,*** has been accepted under the category *Geospatial4Citizens: Urban and Rural Sustainability* Status: Presented at Geospatial Innovation & Frontier Technologies for Sustainability (GIFTS) 2025, being organized under the auspices of ISPRS, 1st to 3rd Sept, 2025

Professional Development:

- Top-5 team member, United Nations Development Program hackathon on air quality forecasting
- Google Data Analytics Professional Certificate, Coursera (offered by Commonwealth of Learning, Canada)
- EO College: Land in Focus: Agriculture and Food (European Space Agency)
- Google Earth Engine for Remote Sensing and GIS (Udemy)
- Python for Data Science Professional Certificate (IBM)

Declaration:

I hereby declare that all the information provided in this resume is true and correct to the best of my knowledge and belief.