SHEKHAR KAMBLE

Geospatial Data Analyst & Automation Expert (Python)

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CAREER SUMMARY:

Geospatial Professional with a double MSc (Geoinformatics & Geography) and specialized expertise in Python automation for GIS workflows. Proven ability to develop custom scripts for remote sensing analysis, watershed morphometry, and site suitability modeling. seeking to leverage advanced skills in ArcPy, GeoPandas to deliver production-grade spatial data solutions.

TECHNICAL SKILLS

- Geospatial Programming: Python (ArcPy, GeoPandas) NumPy, Matplotlib, SQL (Basic).
- GIS & Remote Sensing Software: ArcGIS Pro, QGIS, ERDAS Imagine.
- Surveying & Drone: Pix4D, Agisoft Metashape, DGPS Surveying, DJI Phantom 4 Pro operation.
- Google Earth Engine: Proficient in large-scale data acquisition, Experienced in spectral analysis."
- Soft Skills: Technical Documentation, Field Data Management

RELEVANT PROJECTS:

Drought Assessment in Northern Latur (2010–2022)

- Developed Python scripts for map automation to process temporal Landsat imagery.
- Automated calculation of geospatial indices: NDVI, NDWI, and NDMI.
- Utilized SPI-3 to characterize precipitation deficits across administrative boundaries.
- Built CDHI model using weighted overlay analysis to classify drought severity.

Integrated GIS & UAV-Based Solar Potential Estimation

- Generated high-resolution (2.48cm/pixel) Orthomosaics and DSMs of Kolik village using UAV.
- Digitized building rooftops to quantify solar potential based on roof area.
- Conducted Demand-Supply Analysis by integrating household electricity consumption data with geospatial potential
- Utilized ArcGIS Pro, Pix4D Mapper, and DJI Phantom 4 Pro for data collection and analysis.

Automated Watershed Morphometry & Analysis Tool (Current)

- The Challenge: Traditional manual calculation of stream ordering and basin geometry is time-consuming and prone to human error.
- The Solution: Developing a Python-based tool to automate the delineation of watershed boundaries and extraction of morphometric parameters.
- Impact: Engineered a workflow that reduces analysis time for hydrological parameter extraction by approximately 70%, enabling rapid prioritization of sub-watersheds for conservation.

EDUCATION:

- M.Sc. in Geoinformatics | Shivaji University, Kolhapur | 2024 – 2026
- M.Sc. in Geography | Shivaji University, Kolhapur | 2022 – 2024