Ten Days of Structured Learning

Each day combines conceptual morning sessions with hands-on afternoon work in Python and GIS.

Week 1 — Thermal Analysis

Day	Theme	Morning — Concepts	Afternoon — Hands-On
1	Geothermal Systems & Satellite Data Foundations	Overview of geothermal system types; exploration indicators; key satellite missions and sensors	Data discovery and acquisition; evaluating spatial, spectral, and temporal resolution
2	Satellite Data Preprocessing	Radiometric calibration, atmospheric correction, geometric correction; error propagation	Implementing preprocessing workflows in Python; preparing multi-date, multi-sensor datasets
3	Land Surface Temperature Mapping	Physics of thermal radiation; surface heat flow; distinguishing geothermal signals from environmental noise	LST retrieval workflows; thermal anomaly identification for a real study area
4	Machine Learning for Thermal Anomalies	Overview of ML approaches for thermal data; model selection and limitations	Applying ML algorithms to thermal imagery; generating and interpreting anomaly maps
5	Visualization & GenAI Workflows	Principles of scientific visualization; uncertainty communication; ethical use of GenAI	Publication-ready maps in Python and QGIS; GenAI-assisted code generation and prompt engineering
🧭 Weekend Field Excursion — Visit to a mapped geothermal site to collect field observations for validating thermal anomaly maps and structural data used in Week 2.			

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