JUNAID AZIZ

Lecturer & Geospatial Scientist | GIS & Remote Sensing Expert | PhD Candidate (NUST)

PROFESSIONAL PROFILE

An accomplished Geospatial Scientist and Environmental Specialist with over a decade of combined academic instruction, structural spatial research, and industrial consultancy experience. Recognized expert in climate change risk profiling, Glacial Lake Outburst Flood (GLOF) vulnerabilities, hyperspectral imaging, and multi-criteria decision frameworks. Proven success leading climate-resilient mapping projects funded by international development bodies including the World Bank, IUCN, and UNESCO.

ACADEMIC & PROFESSIONAL EXPERIENCE

- **Lecturer & GIS Specialist (Spin-offs)** | National University of Sciences and Technology (NUST), Islamabad *(July 2015 – Present)*
  Deliver advanced curriculum instruction in remote sensing and spatial engineering while overseeing high-level geospatial project frameworks and technological software integration.
- **GIS Specialist (USAID Power Distribution Program)** | PITCO (Pvt) Ltd., Lahore *(2013 – 2015)*
- **Remote Sensing & GIS Manager** | National Academy of Computer Sciences (Pvt) Ltd., Islamabad *(2013)*
- **Research & Teaching Assistant** | Institute of Geographical Information Systems (IGIS), NUST, Islamabad *(2012 – 2013)*
- **GIS Field Officer** | iMMAP Pakistan *(2012)*

EDUCATION & ACADEMIC BACKGROUND

- **Ph.D. in Environmental Sciences (Research In-Progress)** | NUST, Islamabad
  Core Specialization: Glacier dynamics, climate change vulnerabilities, and predictive GLOF hazard modelling.
- **M.Sc. in Remote Sensing and GIS** | NUST, Islamabad *(2013)*
  Thesis: Evaluation of Hyperspectral Imagery for the identification and mapping of minerals.
- **B.Sc. in Geology** | University of Sindh, Jamshoro *(2007)*

SELECTED INTERNATIONAL CONSULTANCIES & FUNDED PROJECTS

- **World Bank Projects:** Spearheaded urban risk mapping and zoning for Rawalpindi/Nowshera districts via Sheharsaaz (2024), and conducted comprehensive Property Tax MIS Assessments for CLICK, Karachi.
- **IUCN & International Reserves:** Led spatial zonation, deforestation reversal models, and biodiversity conservation mapping for the AlUla Protected Area Network and King Salman Royal Nature Reserve (Saudi Arabia).
- **UNESCO Volunteer Support:** Formally executed complete "GIS Mapping on UNESCO-supported Schools in Pakistan" (2024).
- **Community Hazard Relief:** Directed GLOF susceptibility modeling and relocation site mapping for Badswat and Zhiture villages, funded by the Aga Khan Rural Support Programme (AKAH).

SCHOLARLY PUBLICATIONS & R&D MENTORSHIP

- **High-Impact Research:** Published 20+ peer-reviewed papers across core international science journals. Lead contributions focus on flood scenario analysis (Attabad Lake, Shisper Lake), satellite-driven evapotranspiration models, land cover transitions, and urban heat distribution frameworks.
- **Undergraduate Innovation Projects:** Supervised award-winning student R&D designs, including an AI-powered automated cartographic generation chatbot (*CHATTERBOT*), real-time shoreline change dashboards, a Rector's Gold Medal-winning web-based GLOF model, and an award-winning first-person BIM-GIS asset model.

CORE COMPETENCIES & GEOSPATIAL TOOLKIT

Methodological Toolkits: Hyperspectral Analytics, Multi-Temporal Change Detection, Species Distribution Modeling, Data Quality Control QA/QC.

Technical Suite: R, Python, Google Earth Engine (GEE), ArcGIS Suite, QGIS, SNAP, ERDAS Imagine, ENVI, eCognition, Global Mapper.

REFERENCES

Verified global research indexing, project delivery sheets, ESRI certifications, and senior academic references from NUST are available upon request.