

Hafizullah Sarwary - CV

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PERSONAL INFORMATION

Name	Hafizullah Sarwary
Date of Birth	05.Jul.1994
Adress	Via varese 37, 20025, Italy

EDUCATION

10/2023 – Now	POLIMI – Politecnico di Milano, (Milan, Italy) Master's degree (Geoinformatics Engineering) Focus Area (GIS-Programming, SQL-Geodatabases, WebGIS, GIS Analysis, Photogrammetry and Remote sensing)
01/2011 – 06/2015	KPU – Kabul Polytechnic University, (Kabul, Afghanistan) B.Sc. (Geodesy Engineering) Focus Area (Topography Surveying, Geodesy, GIS, CAD, and Civil 3D)
03/2008 – 12/2010	HHS– Habibia High School, (Kabul, Afghanistan) 12 Grade Graduation Certificate (General) Focus Area (Mathematics, Physic, Chemistry, Geology, Geography, trigonometry)

Academic Projects – Politecnico di Milano (2023–2025)

2025 (ongoing)	: GeoCleanr – Python Library for Geospatial Data Cleaning Developing an open-source Python tool to automate the detection, fixing, and reporting of geometry and CRS errors in geospatial datasets using GeoPandas and Shapely.
2025	: Soil Texture Classification using Sentinel-2 & Landsat-9 Applied machine learning for soil mapping in Semnan, Iran, using Python and GIS tools.
2025	: Flood Risk & Damage Assessment using SHUD & Earth Observation Integrated the SHUD hydrological model with Sentinel data to simulate floods and assess insured asset damages for Unipol.
2025	: SE4G – Smart Environment for Green Growth (Lombardy, Italy) Developed an interactive air quality dashboard with real-time data, statistics, and role-based access.
2024	: Landslide Susceptibility Mapping – Northern Italy Created a WebGIS for visualizing landslide risk maps using QGIS and GeoServer.
2024	: Urbanization of Kabul (2001–2024) Analyzed satellite imagery with QGIS and ML to map urban growth and land-use change.
2024	: Environmental Change Detection – Kabul Calculated NDVI, NDWI, and temperature indices using Google Earth Engine for multi-temporal analysis.
2024	: Standard Point Positioning using Least Squares Processed GPS data and applied least-squares adjustment for precise geodetic positioning.

WORK EXPERIENCE

03.2019 – 07.2023	Geographic Information System Expert (Full Time) Government Funded Projects Implementation Unit DABS-PIU, Kabul, Afghanistan <ul style="list-style-type: none">• Spearheaded the development and maintenance of Afghanistan's national energy geodatabase, managing and integrating GIS data for all transmission, substation, and distribution networks across 34 provinces.• Automated data quality and standardization workflows by converting and integrating complex CAD/Civil 3D data into the central GIS system. Conducted advanced spatial analysis, produced all necessary mapping products, and provided GPS/GIS training and technical consultation to government and engineering teams.
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- 09.2016 – 03.2019 **GIS/Survey Engineer** (Full-time)
World Bank Funded Projects Unit WB- PIU along with) DABS (Afghanistan)
- Managed geospatial and survey data for major USAID and World Bank-funded energy infrastructure projects.
 - Developed and maintained project geodatabases (WGS 84 / UTM), integrating CAD/Civil 3D data and performing advanced spatial and hydrological analysis.
 - Prepared topographic and thematic maps and delivered training on GPS, Total Station, and GIS tools to technical staff
- 01/2015 – 09/2016 **CAD-Draftsman** (Full-Time)
East Power Engineering Services (Kabul, Afghanistan)
Assisted in GIS and AutoCAD/Civil 3D design, terrain analysis (SRTM), hydrological mapping, and preparation of land-use maps for energy and transport projects.

LANGUAGE AND SKILLS

Language Skills	Persian (Native)	English (Fluent)	Italian (A2/Basic working knowledge)
Software-Skills	<ul style="list-style-type: none"> - Q-GIS (Expert) - ArcGIS Pro (Expert) - Enterprise GIS (Intermediate) - AutoSHUD/rSHUD (Intermediate) - AutoCAD / Civil 3D (Intermediate) - Microsoft Office (Expert) - GPS, Total station (Expert) 	<ul style="list-style-type: none"> - FME and Automation (Basic) - SQL/PostGIS (Intermediate) - Google Earth Engine (Intermediate) - HTML/CSS/JS (Basic) - Survey machines (Intermediate) - Python (geo/pandas, rasterio) (Intermediate) - Adobe Photoshop/Illustrator (Expert) 	