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 detect, fix, and report geometry and CRS errors in geospatial datasets using GeoPandas, Shapely, and automated validation workflows.
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 SHUD 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, GeoServer, and web layers.
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 • 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. •

| 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	English	Italian
	(Native)	(Fluent)	(A2/Basic working knowledge)

Software-Skills					
-	Q-GIS	(Expert)	-	FME and Automation	(Basic)
-	ArcGIS Pro	(Expert)	-	SQL/PostGIS	(Intermediate)
-	Enterprise GIS	(Intermediate)	-	Google Earth Engine	(Intermediate)
-	AutoSHUD/rSHUD	(Intermediate)	-	HTML/CSS/JS	(Basic)
-	AutoCAD / Civil 3D	(Intermediate)	-	Survey machines	(Intermediate)
-	Microsoft Office	(Expert)	-	Python (geo/pandas, rasterio)	(Intermediate)
-	GPS, Total station	(Expert)	-	Adobe Photoshop/Illustrator	(Expert)