



## Ghulam Hasnain

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### ABOUT ME

Highly skilled GIS Specialist, equipped with a master's degree in GIS and Remote Sensing and 08 years of industry experience. Recognized as a certified problem solver, adept at navigating complex spatial challenges with efficiency and precision. Demonstrates proficiency in leveraging cutting-edge technology to analyze geographic data and develop sustainable solutions.

### WORK EXPERIENCE

#### Geographic information systems specialist

**Universal Service Fund (USF) Co** [ 19/10/2020 – Current ]

City: Islamabad | Country: Pakistan

- Manage GIS staff to ensure quality and efficiency of work.
- Build talent within the GIS team by educating team members on analysis best practices and continuous improvement.
- Administer and maintain our GIS enterprise, including the Geodatabase and data sharing.
- Enforce GIS data governance to ensure data accuracy, consistency, and security.
- Create automation scripts to streamline GIS processes and enhance productivity.
- Collaborate with cross-functional teams to integrate GIS with various systems, such as transportation planning, permitting, disaster recovery, facility management, real estate, and asset administration.
- Design and develop mapping applications that meet our organizational objectives.
- Ensure user-friendly and efficient functionality of GIS applications.
- Identify and promote industry best practices to optimize GIS processes.
- Drive the adoption of efficient workflows and data management techniques within the GIS team.
- Provide training and support to team members to enhance their GIS skills and knowledge.
- Engage in research efforts ranging from proof-of-concept through integrated production.
- Write clear technical documentation to support data development work.
- Perform coverage analysis and analyze geo-telco data to implement broadband projects while considering the maximum underserved/unserved population.
- Use GIS tools to identify and categorize, population, tehsils, union councils, their boundaries, roads, and telecom wired/wireless infrastructure.
- Spatial Data Analysis based on existing telecom nodes, routes, and coverage, and identify unserved/underserved areas.
- GIS-based analysis of the existing optical network and layout of the new network, routes, terrain, soil categorization, node placement, and identification of quantities. Data analysis using GIS for finding anomalies.

#### Geographic information systems specialist

**Mapever Technologies (PVT) Ltd** [ 10/03/2020 – 15/10/2020 ]

City: Abbottabad | Country: Pakistan

- Design, develop and implement systems and databases for geospatial data
- Research and conduct tests on new research tools
- Capturing, converting, creating, editing, and maintaining Digital information in GIS and producing quality cartographic maps
- Managing survey teams and checking the quality of data.

- Attending meetings with stakeholders and discussing biweekly progress reports.
- Analyzing data & designing maps as requested by implementing ArcMap and analyzing relevant data.
- Managed individual data and custom survey data collection application development projects.
- Diagnosed problems experienced with the use of GIS and related software
- Tested, and certified systems and applications software functionality.

## GIS Analyst

**Geodetic Way Engineers** [ 01/01/2017 – 10/03/2020 ]

City: Islamabad | Country: Pakistan

- Created GIS presentations and ensured availability for questions from stakeholders regarding project progress and spatial analysis results.
- Locate potential sites for dumping solid waste, urban development, malls, and roads using multi-criteria analysis.
- Developed and created GIS maps as requested by implementing ArcMap and analyzing relevant data.
- Created tools to simplify and automate GIS cartographic and processing tasks (Python).
- Import XY data, assign coordinate systems, and join attribute tables
- Managed individual data and application development projects
- Diagnosed problems experienced with the use of GIS and related software
- Produced georeferenced historical imagery and maps, and digitized new features as requested.
- Analyzing spatial data using mapping software.
- Discovering glacier movement, identifying patterns and trends through satellite imageries, and performing spatiotemporal analysis.
- Georeferencing and digitizing paper maps to extract and store information in the geospatial data.
- Assigns addresses for new construction projects and performs field verifications of existing addresses.
- Administer and troubleshoot applications and GIS solutions

## EDUCATION AND TRAINING

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### Master in Remote Sensing and GIS

**National University of Science and Technology** [ 19/10/2020 – 07/07/2023 ]

City: Islamabad | Country: Pakistan | Website: [www.nust.edu.pk](http://www.nust.edu.pk)

### Bachelor in Geography major in GIS

**Abbottabad university of Science and Technology** [ 13/09/2014 – 10/11/2018 ]

City: Abbottabad | Country: Pakistan | Website: [www.aust.edu.pk](http://www.aust.edu.pk)

### McKinsey Forward Program

**McKinsey & Company** [ 01/12/2022 – 30/06/2023 ]

Country: Spain | Website: <https://www.mckinsey.com/> | Level in EQF: EQF level 1

### Google Soft Skills Program

**Google** [ 01/05/2024 – 31/07/2024 ]

Country: Pakistan | Website: [www.google.com](http://www.google.com) | Level in EQF: EQF level 1

## LANGUAGE SKILLS

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**Mother tongue(s):** Urdu

**Other language(s):**

**English**


**LISTENING C1 READING C1 WRITING C1**

**SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1**

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## DIGITAL SKILLS

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Microsoft Word / digital marketing / Microsoft Excel / GIS & Remote Sensing / programming: Python, MATLAB and SQL / Data Profiling, Data wrangling, Data Analysis, Data Visualization / Outlook /  Machine Learning / Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation / Visualization, Spatial statistics, Geo-spatial analysis / problem finding, problem shaping, problem solving

## PROJECTS

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[ 10/07/2022 – 28/06/2023 ]

**A Comparative Analysis of Machine Learning Approaches for Sites Suitability of Broadband Towers** The study performs comparative analysis on Support Vector Machine (SVM), Extreme Gradient Boosting (XGBoost) and Random Forest (RF) for identifying suitable sites for broadband towers considering multiple socio-economic and environmental variables in Python and ArcGIS. The research in this dissertation has attempted to develop machine learning methodology for sites suitability analysis and choose the best performing model that can be implemented in radio frequency planning software with the implementation of this tool.

[ 07/08/2017 – 10/05/2018 ]

**Suitable Sites selection for Settlements Using Multi Criteria Analysis in Abbottabad, Pakistan** The research was undertaken in the most congested city of Khyber Pakhtunkhwa. The study implemented Multiple-criteria decision-making (MCDM) along with Analytical Hierarchy Process (AHP) approach to identify and select suitable sites for new settlements while considering multiple socio-economic and environmental variables. The research in this dissertation has attempted to contribute to sustainable infrastructure by reducing disaster risks, accessibility to services, and highlighting the important criterion for the selection of sites for settlements development.