AFIA SARWAR

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Education

- **PhD Geographic Information System and Remote Sensing**   **(2023-Present)**
  University of Delaware, Delaware

- **MS Geographic Information System and Remote Sensing**   **(2017-2020)**
  National University of Science and Technology (NUST), Islamabad

- **BS Geographic Information System and Remote Sensing**   **(2013-2017)**
  University of Peshawar, Peshawar

Professional Experience

June 2021 to January 2023

Teach For Pakistan

I worked as a fellow with Teach for Pakistan. Teach for Pakistan mission is to build a movement of diverse and capable leaders committed to eliminating educational inequity in Pakistan.

August 2020 to January 2021

Pakistan Telecommunication Authority

I worked in the Pakistan Telecommunication Authority (PTA) as a GIS analyst.
My responsibilities were:
- To determine and quantify the administratively served, unserved, and underserved areas of Pakistan in terms of telecommunication services
- To estimate the population in these areas using landScan and Worldpop data
- To generate quality maps using GIS tools

July 2018 to August 2020

Research Assistant

Funded Project

Undertook a project funded by ZHWA University of Applied Sciences, Zurich, Switzerland on the Impacts of climate change on crop yield production and future prediction using APSIM and STICS models in the Indus Basin, Pakistan.

Research and Projects
Journal Publication

M. Azmat, F. Ilyas, **A. Sarwar**, C. Huggel, S. A. Vaghefi, T. Hui, *et al.*, "Impacts of climate change on wheat phenology and yield in Indus Basin, Pakistan," *Science of The Total Environment,* vol. 790, p. 148221, 2021/10/10/ 2021

MS Thesis

Wheat crop production using APSIM model to changing climate: impacts and adaptations

Highlights of Research:

- Studied the major trends of future wheat crop yields in Pakistan under climate change using crop models and CORDEX-SA RCMs-simulations
- Evaluated agricultural adaptations by considering different strategies related to irrigation and sowing dates
- Conducted comparative study on APSM and STICS crop models in the local environment of Pakistan
- Drafted the results and published them in *"Science of The Total Environment"* journal

Certificates

- **Big Data Analysis For Water-Related Applications** conducted from March 10-29, 2020 at United Nations University Institute for Water, Environment and Health
- **Image Processing with ArcGIS** a web course conducted by ESRI on January 12, 2017
- **Getting Started with GIS** a web course conducted by ESRI on July 30, 2016
- **Using ArcMap in ArcGIS Desktop 10** a web course conducted by ESRI on July 30, 2016
- **Editing in ArcGIS Desktop** a web course conducted by ESRI on July 30, 2016
- **Field GIS: Collecting and Editing Data Using ArcPad10** a web course conducted by ESRI on July 30, 2016
- **Basics of Geographic Coordinate Systems** a web course conducted by ESRI on July 29, 2016

Professional Skills

- **GIS and Remote Sensing**:   ERDAS imagine, ESRI ArcGIS, QGIS, MapInfo
- **Programming Languages**:   Python (Basics)
- **Crop Models**:   APSIM, STICS
- **MS Office:**   Word (Certified), Excel, PowerPoint etc.

References

Muhammad Tayyeb	**Prof. Dr. Atta-ur-Rahman**
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