

Position: GIS Research Assistant**Project:** Build a GIS for Zambian Water Project

Project Description: We are seeking a research assistant experienced with GIS and data management to help create a comprehensive set of harmonized data for a project related to water access and health outcomes in Lusaka, Zambia. We have access to a wealth of data provided by the government and service providers in Zambia, and are looking to bring together data on health, water quality, and water provision to illuminate the impact of water systems in Lusaka.

Tasks:

1. Harmonize vector shapefiles for pipes, roads, supply districts, etc. Identify possible datum definition errors or use Spatial Adjustment.
2. Identify which datasets might be useful from a bulk download of Zambian data including shapefiles, tables, and KMZ files.
3. Possible georeferencing and digitizing of missing data if needed.
4. Identify spatial data to join with school attendance data (given at the facility level), or geocode.
5. Identify spatial data to join with “complaints” data.
6. Identify spatial data to join with water quality data.
7. Identify spatial data to join with Health data (given at the facility level), or geocode.
8. Find suitable DEM & calculate necessary elevation metrics for the Lusaka metro area.
9. Prepare a geodatabase with all files that are deemed useful for the project, including relevant metadata.
 - a. Project all files into a projection well suited for the area
 - b. Develop metadata for all files

Necessary Skills:

- Experience with ArcMap 10.x, including geocoding, georeferencing, spatial adjustment, table joins, spatial joins, digitizing, raster – vector integration, coordinate systems.
- Experience working with wide range of data sources, and manipulation of data: tabular, shapefile, geodatabase, KML, raster.

Time and Compensation:

- Estimated 100 hours of project work time, with at least 10 – 15 hours per week.
- Compensation \$15/hour
- Harvard affiliation preferred

Application Instructions:

To apply, please send a résumé with a cover letter to:

Marlene Wolfe
Research Manager, Prof Nava Ashraf
Harvard Business School
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