Shangbin Tang

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Passionate about combining GIS and data science. Dedicated to empowering maps and data visualizations with aesthetics. Proficient in geospatial analysis, remote sensing image processing & interpretation, and data analysis. Tackle tasks from daily data processing & mapping to mass spatial data analysis such as cross-disciplinary COVID vaccination facilities' accessibility evaluation.

EDUCATION

University of Pittsburgh, Kenneth P. Dietrich School of Arts & Sciences — **Pittsburgh, PA**
Professional Master of Science in GIS and Remote Sensing — Anticipated Dec. 2021
Current GPA: 3.7/4.0

Chang'an University, School of Earth Science and Resources — **Xi'an, Shaanxi, China**
Bachelor of Science in Geographic Information Science — Jun. 2019

PROJECT EXPERIENCE

Geographic Accessibility of Community Pharmacies to the Public in the US — **Pittsburgh, PA**
GIS Analyst — Aug. 2020 – Apr. 2021

- Assessed the current state of pharmacy accessibility in the United States using network traveling distance
- Identified the disparity in the accessibility of pharmacies to residents across regions
- Cleaned, organized, and analyzed data using ArcGIS and python

Access to Potential COVID-19 Vaccine Administration Facilities: A GIS Analysis — **Pittsburgh, PA**
Collaborative Project with University of Pittsburgh, School of Pharmacy — Jul. 2020 – Jan. 2020
GIS Analyst

- Faculty-lead research project, funded by the West Health Policy Center
- Published white paper to identify and present health care infrastructure limitations to policymakers and the public
- Performed big data analysis and spatial network analysis
- Evaluated the accessibility of COVID-19 vaccination providers in the U.S. to the general public with various income levels and races.
- Produced informative maps to visualize results and highlight the potential at-risk population and regions

Assessment of Heavy Metal Pollution Sources and Spatial Distribution in a Sub-Urban District of Weinan, Shaanxi, China — **Xi'an & Weinan, Shaanxi, China**
Nov. 2018 – Jun. 2019
Assistant Researcher

- Collected and processed soil samples in the research area and analyzed physicochemical characteristics by detecting content with the heavy metal detector and atomic absorption spectrophotometer
- Built a digital elevation model (DEM) based on remote sensing drone images and GPS data
- Derived relevant spatial distribution maps and explored the spreading pattern of heavy metals
- Provided suggestions for local government's pollution management

WORK EXPERIENCE

Xi'an Institute of Geological & Mineral Exploration Co., Ltd. — **Xi'an, Shaanxi, China**
Intern Technician — Jun. 2018 – Jul. 2018

- Interpreted remote sensing images, classified and vectorized land types, registered attributes, and checked data accuracy
- Built and maintained geo-databases
- Completed the interpretation and vectorization of 45 aerial images and 11 million square meters of polygon features drawing

Guangxi Bureau of Survey, Mapping and Geoinformation — **Nanning, Guangxi, China**
Intern Technician — Jul. 2017 – Aug. 2017

- Participated in the Survey of National Geographical Conditions
- Artificial interpretation and vectorization based on satellite aerial images, registered data into geo-database

SKILLS

- Proficient with spatial analysis, remote sensing images processing & analysis, ArcDesktop Suite, ArcGIS Pro, Google APIs, and ERDAS software
- Python, R, SQL, data analysis, data mining, data visualization
- HTML, CSS, and JavaScript
- English, Mandarin, Cantonese

CORPORATE TRAINING

Environmental Systems Research Incorporated (ESRI)

- Creating Python Scripts for Raster analysis
- Python Scripting for Geoprocessing Workflows
- 3D Analysis of Surfaces and Features Using ArcGIS
- 3D Visualization Techniques Using ArcGIS
- Distance Analysis Using ArcGIS
- Creating Prediction Surface in ArcGIS
- Using Raster Data for Site Selection

RELEVANT COURSEWORK

- INFSCI 2725 - Data Analytics
- INFSCI 2160 - Data Mining
- INFSCI 2410 - Intro to Neural Networks
- INFSCI 2415 – Data Visualization
- PIA 2715 - GIS for Public Policy
- GEOL 2460 – Applied Remote Sensing & GPS Techniques