Anran Zheng

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EDUCATION

University of Florida   Gainesville, FL
Master of Transportation Engineering   *Aug 2023*

University of Pennsylvania   Philadelphia, PA
Master of Urban Spatial Analytics   *May 2022*

Capital Normal University   Beijing, China
Bachelor of Science in Geographic Information System (GIS)   *Jun 2021*

WORK EXPERIENCES

AECOM   Oct. 2023 - now
GIS Specialist II   *Houston, TX*

- Collaborated with planning & data analytics teams to deliver timely and accurate GIS products to **TxDOT**.
- Collected and processed multi-source datasets (**Census, Replica, OSM**) and managed them in a geospatial database with **500+** records on AGOL for enhanced visualization and client accessibility.
- Developed GIS-based tools and Python scripts to automate and streamline mapping, data management, and geoprocessing workflows, reducing task time by **80%** and improving overall project efficiency.
- Designed and implemented interactive dashboards and web-based digital book (**60+ pages**) through AGOL Dashboard and Experience Builder, enabling clients to clearly review and interpret findings.

Chinese Academy of Surveying and Mapping   Jul. 2020 - Jan. 2021
GIS Analyst   *Beijing, China*

- Conducted geospatial analysis of extensive satellite imagery data using **Arcpy** to study the impact of climate change on lakes in Tibet, achieving **90%** reduction in computation time.
- Performed spatial and statistical analysis about land-use changes among different cities in China with QGIS, SPSS and advanced Excel functions (**VLOOKUP, Pivot Table**).

SELECTED PROJECTS

Data-Driven Analysis for Mobility Hub Siting in Florida   May. 2023 - Oct. 2023
- Automated workflows for data collection, analysis, and visualization using Python (**GeoPandas**) and **Model Builder**, optimizing the placement of 12 mobility hubs across multiple cities in Florida.
- Developed a [**Story Map**] on AGOL and prepared technical reports to present project details. Integrated GIS tools and Python scripts with download options, earning **99%** positive feedback from **FDOT**.
- Presented the findings on **TRB Conference** and Webinar, reaching 500+ audiences.

Data Analytics of Bus Service Reliability in Miami [link]   Nov. 2022 - Oct. 2023
- Managed the extraction and processing of ∼ **100 GB** of 5-year bus GPS data using Python and SQL.
- Created **40+** advanced visualizations using Python & R (**Seaborn, ggplot**) to analyze service reliability trends and and delivered reports to Miami Transit Authority.
- Conducted explanatory data analysis and feature engineering of bus service reliability data. Applied a Time-Fixed Effects regression model to identify 3 key features impacting the bus ridership.

Planning of E-bus Charging Stations in Florida [link]   Oct. 2022 - May. 2023
- Extracted real-time vehicle location data at ∼ **1 million** records over half a year from public APIs.
- Applied a weighted **K-means clustering** model to optimize locations for e-bus charging stations, enhancing service coverage to **95%** of e-buses with the proposed solution.

Multimodal Spatial Accessibility to the COVID-19 testing sites in NYC [link]   Nov. 2021 - Apr. 2022
- Built an ETL pipeline using Python and SQL to extract, transform, and load COVID-19 related data into Google Cloud Storage. Created a web-based interactive dashboard using Python and BigQuery.
- Utilized **Network Analysis** to identify multimodal accessibility to COVID-19 testing sites in ArcGIS Pro.
- Modeled socioeconomic factors influencing the spatial accessibility in RStudio.

SKILLS

Programming: Python (Scikit-learn, GeoPandas, Seaborn), R (Tidyr, Caret, Shiny), SQL, C++, Arcpy.
Spatial Analysis: ArcGIS, Module Builder, QGIS, ArcGIS Pro, FME, AutoCAD.
Data Analytics: Tableau, PowerBI, Javascript, HTML/CSS, ArcGIS Online (AGOL).