

XIANGYU WEN

xiangyugis.github.io • 206-637-1629 • wenxiangyu@outlook.com • www.linkedin.com/in/xiangyu-wen/

GIS specialist with five years of combined professional and academic experience in **spatial analysis**, **data visualization**, **web mapping** and **machine learning**. Proficient in **GIS software** and **programming languages**. Looking for full-time opportunities to apply my analytical and problem-solving skills to clearly present requested geographic data.

Skills

Programming: Python (ArcPy, Pandas, Matplotlib, Seaborn, Numpy, TensorFlow, Keras), SQL, R, JavaScript

Tools: ESRI Software Suite, Google Earth Engine, Portal for ArcGIS, QGIS, Erdas, GeoDa, PostgreSQL, PostGIS, Mapbox, Leaflet

Experience

Clark Labs

Worcester, MA

GIS Programmer

August 2021 – Present

- Participated in developing deep learning architectures to examine growth in pond aquaculture to determine vulnerability in habitats.
- Implemented semantic segmentation of aquaculture and mangroves using U-Net and Landsat imagery with TensorFlow and Keras.
- Using advanced coding to speed up automated classification procedures by 60%.

Cloud to Street

Brooklyn, NY

GIS/Remote Sensing Intern

May 2021 – August 2021

- Defined metrics for validation and developed automated scripts for the visualization of all final and intermediate products generated by the science team.
- Adapted methods into company's existing technology in Google Earth Engine and Python.
- Standardized and documented developed methods in code (JavaScript and Python).

Clark Labs

Worcester, MA

Remote Sensing Research Assistant

November 2020 – June 2021

- Worked with a team to research mangrove deforestation and the expansion of shrimp aquaculture.
- Conducted supervised land-use classification using machine learning techniques to identify changes in mangrove deforestation and shrimp aquaculture.
- Digitized outputs from supervised classification to ensure data quality for producing baseline maps.

Central Washington University

Ellensburg, WA

Geography Learning Group Facilitator

August 2019 – June 2020

- Assisted students in understanding Physical Geography course contents by conducting lectures to groups of students.
- Assisted students in developing effective study skills and behaviors that lead to academic success.
- Supported office assistants in daily operations and the smooth functioning of the unit as a whole.

Central Washington University Facilities

Ellensburg, WA

GIS Technician

June 2019 – Sept 2019

- Generated and updated GIS maps for university facilities of CWU to have a better operation management system.
- Helped CWU shifting CAD utility maps to GIS maps by converting CAD formatted data into shapefiles using ArcGIS.

Projects

Twitter Events Based Spatio-temporal Analysis

December 2020

- Analyzed tweet data in the US spatially and temporally to find out how the public reacts to the COVID-19 pandemic on Twitter.
- Used data mining and natural language processing Python libraries to extract information from tweet data.
- Performed Mann-Kendall trend analysis, Moran's I, density mapping, and hotspot mapping to uncover spatial patterns of tweet data.

Leaflet Interactive Web Map for University Sustainability

January 2021

- Built a whole webpage with an interactive web map to display Clark University's effort to promote a sustainable community.
- Used Leaflet API for functioning the interactive map and Mapbox Studio to design the base map

Education

Clark University *Worcester MA*

GPA: 3.9

Master of Science in Geographic Information Science

May 2022

Central Washington University (CWU) *Ellensburg WA*

GPA: 3.7

Bachelor of Science in Environmental Science

June 2020