WANXIN.LI

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SUMMARY OF QUALIFICATIONS

Highly skilled GIS professional with Master's in Spatial Data Science and dual Bachelor's degrees. 3+ years experience in GIS technology, including ESRI's ArcGIS and Google Earth Engine. Proficient in Python, SQL, and GIS programming. Expertise in spatial analysis, automated workflows, and data visualization. Strong background in remote sensing and machine learning. For a comprehensive overview, visit https://casslii.github.io/.

EDUCATION

University of Southern California   Los Angeles, CA
Master of Science, Spatial Data Science   May 2024

University of Waterloo   Waterloo, Canada
Bachelor of Environment Science, Geomatics   June 2022
Minor in Mathematics

Capital Normal University   Beijing, China
Bachelor of Science, Geographic Information Science   June 2020

WORK EXPERIENCE

Research Assistant   Los Angeles, CA
Dr.Yi Qi Urban Tree Lab – Spatial Sciences Institute of University of Southern California   August 2023 – Present

Research focus: use machine learning models to tracking and mapping large-scale urban tree in Los Angles
- Developed a scalable workflow for mapping and tracking over 70,000 urban trees species in Los Angles
- Led the research on USC tree mapping using NAIP imagery; achieved 68% accuracy in species classification
- Implemented multi levels tree species classification in Los Angeles with imagery and canopy height dataset

GIS Technical Engineer Intern   Beijing, China
YunZhong Century Technology (Beijing) Co. Ltd.   May 2023 - July 2023

Managed back-end data processing for China's Eco-Meteorological Service system
- Created and deployed automated data collection algorithms that processed and analyzed over 10 yeas meteorological images, resulting reduction in time spent on manual data entry and analysis tasks
- Engineered a suite of specialized GDAL scripts that facilitated the automated clipping and transformation of raster data, improved the function library, expediting project delivery timelines
- Directed analysis on nighttime lighting data of China from 1992 – 2020 and in charge of data preprocessing

Technical Engineering Intern   Beijing, China
GeoScene Information Technology Co. Ltd. (ESRI China)   April 2021 - June 2021

Designed management tools for the China Ministry of Ecology and Environment, ensuring clear communication
- Executed topology validation processes with ArcGIS Pro, identifying and rectifying 100+ inconsistencies in datasets
- Designed a model for the Contaminated Land Decision Support System, integrating advanced analytics to determine critical indicators

UNIVERSITY PROJECTS

- **Object Detection** - Developed object detection methods for urban tree canopies using the YOLO model
- **Urbanization Time Series Analysis** – Arranged a 20-year land use classification study using Landsat 8,
- **Chatbot Development with Large Language Models** - Collaborated on deploying a Teaching assistant Q&A chatbot performed OCR on over 500 images and videos, effectively guiding students access resource
- **Web Mapping** - Created interactive bike maps for the City of Victoria using Web AppBuilder, ESRI Leaflet, and ArcGIS JavaScript API. Improved cyclist navigation and safety by integrating bike data
- **Spatial Pattern Analysis** – Teamed to devised spatial pattern analysis on 50 states, finding spatial autocorrelation of flight and COVID-19 infection rates, providing actionable insights for health authorities

RELEVANT COURSES

Spatial Data Science, Data Science at Scale, Data Science Professional Practicum, Spatial Databases, Principles of Programming for Data Science, GIS Project, Remote Sensing Project, Multivariate Statistics, Probability, Statistics

ADDITIONAL INFORMATION

Applications: ArcGIS Pro, Leaflet, PCI Geomatica, ENVI, ERDAS IMAGINE, QGIS, GEE, Python, C, C++, R, SQL, Excel
Skills: Ability to use Python to machinal leaning analysis and classification, expertise in remote sensing imagery analysis, data visualization, network analysis, flood modeling, and terrain analysis.