Xiaoyi Wu
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EDUCATION

University of Pennsylvania Sep 2021-Jun 2022
Master of Urban Spatial Analytics
- Main coursework: Remote Sensing, Artificial Intelligence, Transportation Planning, Multimodal Transportation, Spatial Statistics, Data Analytics, Game Theory, Public Policy Analytics
- Honors: Master's Degree Scholarship, 2021-2022

China University of Geosciences (Beijing) Sep 2016-Jun 2020
Bachelor of Science, major in Geology (the Training Base for Geosciences)
- GPA: 3.5/4.0
- Honors: Professional Scholarship (top 10%, three times), 2017-2019

RESEARCH EXPERIENCE

Landslide Identification using Machine Learning Models with Generative Adversarial Networks Current
University of Pennsylvania
- Wrangled and processed landslide data with topologic and environmental information from Open Geo-Spatial Data in HK (2022) based on ArcGIS Pro and Google Earth Engine
- Developed Generative Adversarial Networks to create synthetic data and increase training dataset
- Built Random Forest, Support Vector Machines, K-nearest Neighbors and Convolutional Neural Network models with synthetic data to predict the occurrence of landslide in Hong Kong, China

Median House Value Prediction in Boulder, Colorado Dec 2021
University of Pennsylvania
- Wrangled and processed socio-economic and geographic data with web-APIs to do exploratory analysis and feature engineering
- Built spatial regression models to predict median house values in Boulder County
- Revised models based on cross validation and feature importance analysis, discussed generalizability in different contexts and made policy implications

Multi-agent Reinforcement Learning Sep 2020-Sept 2021
Research Assistant, Institute of Automation, Chinese Academy of Sciences
- Conducted research on multi-task coalitional games and developed deep reinforcement learning architecture with independent learners based on human rationality
- Designed core functions and web interaction of Jidi platform, programmed baseline algorithms and environments

Dynamic Monitoring of Urban Land Use and Expansion Process Analysis of Chengdu, Sichuan 2019-2020
China University of Geosciences (Beijing)
- Collected Landsat and Sentinel-2 remote sensing images, and generalized three-index synthetic images to extract different types of land cover based on integrated normalized differential farmland index (NDFI) and soil-adjusted vegetation index (SAVI) and normalized differential building index (NDBI)
- Used object-based models to classify land cover, and extracted city boundary based on entropy maximum method
- Constructed land use transition matrix, and made spatio-temporal analysis of the urban sprawl process in Chengdu

INDUSTRY EXPERIENCE

Kuayue Express Mar-Sep 2020
Data Analyst Intern, Department of Automated Logistics System
- Defined the tracking point of invalid scheduling events based on historical data analysis, designed dynamic evaluation model and visualized real-time spatial-temporal distribution of delivery tasks
- Developed customer behavior models to predict shipping weight, and designed the logistics system which can assign the delivery tasks automatically
- Conducted experiments based on terrain and GPS data, and optimized scheduling mechanism under traffic restriction scenarios, which increased the system coverage rate by 11% and the scheduling success rate by 7%

SKILL

- **Programming:** Python | JavaScript | Matlab | R |C++
- **Software:** GeoDa | Oracle | ArcGIS | ENVI | Adobe Illustrator