Xiaoyi Wu
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EDUCATION

University of Pennsylvania Sep 2021-Jun 2022
Master of Urban Spatial Analytics
- GPA: 3.54/4.0
- 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:
  1. Professional Scholarship (three times), 2017-2019
  2. First Prize of the Third College Physics Academic Competition, Oct 2018
  3. First Prize of College Social Practice, Oct 2018
  4. First Prize of the Green Plus Creativity Competition, Apr 2018

RESEARCH EXPERIENCE

Project on Median House Value Prediction in Boulder, Colorado Dec 2021
Project Leader, University of Pennsylvania
- Wrangled and processed socio-economic and geographic data with web-APIs to do exploratory analysis and feature engineering
- Built Ordinary Least Squares Regression, Spatial Lag Regression, Geographically Weighted Regression models to predict median house values in Boulder, and made a series of interactive maps and plots based on JavaScript
- Revised models based on cross validation and feature importance, discussed generalizability in different contexts and policy implications

Research on Multi-agent Reinforcement Learning Sep 2020-Sep 2021
Research Assistant, Institute of Automation, Chinese Academy of Science
- Conducted research on multi-agent coalitional games, a novel problem studying dynamic team structure optimization with flexible agent number and diverse environments which needs different skills and solutions
- Simulated experiments in multi-task environments and developed a hypergraph model with reinforcement learning algorithms focusing on resource distribution and labor division to maximize social benefits
- Designed core functions of Jidi online evaluation platform, programmed baselines for algorithms and environments
- Acted as a teaching assistant of class Game Theory, assisted in designing course, answering questions and evaluating assignments

Project on Protection and Sustainable Development Model of Geological Relics in Hunan 2018-2019
Project Leader, China University of Geosciences (Beijing)
- Collected and processed high-resolution remote sensing images to extract ground object information
- Constructed geo-database including GPS, geologic and socio-economic data, trained and developed travel demand prediction models with 12 features
- Formulated a 20-page report of sustainable development planning with thematic maps to local government

INDUSTRY EXPERIENCE

Kuayue Express Mar-Sep 2020
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
- Conducted experiments based on terrain and GPS data, and optimized the scheduling mechanism under traffic restriction scenarios, which increased the system coverage rate by 11% and the scheduling success rate by 7%
- Developed a shipping weight prediction model based on customers' order history to help the company choose the most effective way to ship

SKILL

- **Programming:** Python | JavaScript | Matlab | R | C++
- **Software:** MapGIS | Oracle | ArcGIS | ENVI |AdobeIllustrator