

# Yingxin Wang

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## EDUCATION

### **Master of Science: Environment and Sustainability**

(09/2021 – 04/2023) *University of Michigan (Ann Arbor, MI)*

- Concentrations: **Geospatial Data Sciences**

### **Bachelor of Science: Geographical Information Science**

(09/2017 – 06/2021) *Wuhan University (Wuhan, China)*

- Awards: Outstanding Graduates, Honor Student, Scholarship for Academic Excellence

- Summer Program

(06/2019-08/2019) *University of British Columbia (Vancouver, Canada)*

## PROFESSIONAL EXPERIENCE

### **Departmental Analyst – Energy Unit:** Michigan Department of Environment, Great Lakes, and Energy

(11/2023 - Present)

- **Renewables Ready Communities Award:**
  - Designed award, develop Request for Proposal, monitored grants, processed payment, and provided oversight and support to grantees to facilitate successful project as the grant manager for Renewables Ready Communities Award under the assignment with rulemaking for a \$30 million State FY 2023 budget allocation.
- **Renewable Energy Academy:**
  - Designed the technical assistant program to engage community stakeholders to identify issues, barriers, and opportunities related to renewable energy by developing and updating educational materials, including best practices and deployment strategies for energy and zoning.
  - Built GIS models for assessing suitability for renewable energy development potential, then delivered the developed educational materials on planning and zoning for renewable energy to communities in Michigan.
- Researched existing renewable projects in Michigan and created analyses on both the quantitative and qualitative items in their zoning ordinances.
- Provided visual designs and supports in websites and program materials, and became the primary resource for questions about utility-scale renewable energy within energy unit.

### **Research Assistant:** Graham Sustainability Institute

(08/2022 - Present)

- Created and updated databases and maps for energy-related projects daily.
- Collaborated with the School for Environment and Sustainability and Eastern Michigan University to conduct multiple studies of renewables in the Midwest.
- Created a GIS database with 9 socio-economic spatial data from 2000 to 2020 for Michigan townships that host wind turbine projects and their geographical neighbors using ArcGIS Pro.
- Generated nearest distances from a subdivision to different voltage classes of transmission lines for over 10,000 subdivisions in 6 states; analyzed the cost of land for building transmission lines based on the nearest distance overlaid with terrain-type raster layer and calculated the area within each land cover type.
- Created a series of wind and solar energy visualizations with 21 thematic maps based on the zoning database for 6 states.

### **Graduate Research Consultant:** University of Michigan Master's Project, Michigan Department of Environment, Great Lakes, and Energy

(01/2022 – 05/2023)

- Designed a program to facilitate proactive utility-scale renewable energy zoning across Michigan.
- Interviewed 24 township representatives to facilitate utility-scale renewable zoning development; transcribed and analyzed the interviews using NVivo to make codebooks and over 20 charts for future research.
- Designed flyers, mailers, surveys, and worksheets with around 200 residents' responses to facilitate community engagement in discussing renewable energy.
- Conducted resource assessments to analyze the suitability of wind and solar energy in partner townships using models in Energy Zones Mapping Tool; created setbacks simulation and 14 zoning maps for partner townships in ArcGIS Pro to present at public events.

**Personal Project:** Wuhan University Bachelor Thesis, Optimal Growth Model of Cherry Blossom Trees Based on Terrestrial Laser Scanning *(10/2020 - 06/2021)*

- Utilized 3D laser scanner to conduct field measurement to obtain point cloud data of 60 cherry blossom trees.
- Processed data in LiDAR360 to acquire ecological features for each tree, including height, crown size, and trunk diameter; analyzed the correlation of the features to generate the allometric relations and established tree optimal growth model.

**Research Project:** Spatial-Temporal Visualization for China's Western Region Development Project *(09/2018 - 12/2019)*

- Collected, analyzed, and visualized the number and origin of the college graduates who participated in the "Western Project" from 1999-2019; presented the intermediate outcomes at the 17th SuperMap GIS contest in 2019.
- Charted migration maps of college graduates and density of the impoverished counties on ArcGIS; analyzed the feasibility of placement plan for the graduates; visualized the geographic distribution, development trends, and outcome.

## **TECHNICAL SKILLS**

- **Software:** ArcGIS Pro, ArcGIS Desktop, Arcpy, AGOL, QGIS, GeoDa, ERDAS Imagine, Survey123, Field Map, CorelDRAW, Adobe Photoshop, Microsoft Suite
- **Coding Languages:** R, Python, C++, C
- **Languages:** Fluent in English and Chinese, conversant in Korean