JINGYI LI

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SKILLS

GIS: ArcGIS Pro & Online, Survey 123, Esri Storymap, ArcGIS Javascript SDK, GDAL (ogr2ogr), Leaflet.JS, Mapbox
Database & Cloud Services: PostgreSQL + PostGIS, MySQL, Google Big Query, Google Cloud Platform, ETL
Computer Programming: GIS Web Development (HTML, Javascript, CSS, MongoDB), Automation (Python)
Planning & Business Analysis: Urban Planning, Cultural/Natural Resource Management, Project Management, Feasibility Study, Hydrological Analysis, Pro Forma Analysis, Urban Redevelopment, Public Policy
Graphic Design: Adobe Suite (Photoshop, InDesign, Illustrator), Data Visualization (Python, Excel)

EDUCATION

University of Pennsylvania, Stuart Weitzman School of Design, Philadelphia, PA Aug 2023
Master of Science in Historic Preservation

Harbin Institute of Technology, School of Architecture, Harbin, China Jun 2020
Bachelor of Architecture (*Architecture Portfolio*)

EMPLOYMENT

Department of City Planning, Stuart Weitzman School of Design, UPenn, Philadelphia, PA Sep 2022 - May 2023
GIS & Machine Learning Research Assistant, Teaching Assistant (Cloud Computing & Javascript Programming)

- Used ArcGIS, ML, and datasets on demographics, parcels, and property listings to map the relationship between the marketing of smart growth characteristics and neighborhood racial and income change.
- Managed in-class collaboration projects; configured cloud infrastructure; established CI/CD for assignment submission and query tests (Python & JS) on GitHub Actions; and assisted in troubleshooting GIS full-stack web dev, ETL scripting, and SQL queries on GIS datasets (landcover, watershed, census, parcels, transportation, etc).

Department of Computer & Information Science, Penn Engineering, Philadelphia, PA Present
Research Intern at NetDB@Penn, Teaching Assistant (CIS5050 Software Systems)

- Researched SQL query optimization for distributed relational databases and automated the benchmark evaluation for a research paper submitted to The Conference on Innovative Data Systems Research (CIDR).

Center for Architectural Conservation, Philadelphia, PA Apr 2022 - May 2023
GIS Intern

- Processed Lidar, DEM, landcover, and rainfall data, and conducted hydrological analysis using ArcGIS Pro and HEC-RAS, which helped to identify earthen walls that require the most immediate intervention. Communicated technical concepts and results to non-technical audiences through emails, meetings, and graphics.
- Used ArcGIS Storymap, GIS web mapping (Leaflet.JS), and 3D geospatial data visualization (CesiumJS) to create a *website* for the CMP project to enhance business branding and foster community engagement.

Astoria AI Inc, New York, NY Jun 2022 - Aug 2022
Software Developer Engineer Intern (Remote)

- Developed a prototype for a customer service chatbot deployed applications on Azure.
- Automated public-sourced data harvesting and analysis.

China Architecture Design and Research Group, Beijing, China Nov 2019 - Mar 2020
Intern Architect, Ju Atelier Department

- Conducted site analysis, design, 3D modeling, and architectural drawings for a commercial building complex; the project was shortlisted as an architectural competition finalist.

PROJECTS in GIS

Mapping the Flood Susceptibility for Historic Properties and Districts in Philadelphia (*Report*)

- Used ArcGIS Pro to conduct hydrological analysis for city-wide properties
- Used Model Builder for workflow automation.

A Grading System of Locating a Community Garden in Rio de Janeiro, Brazil (*Report*)

- Used census, transportation, topography, and water data to analyze location in ArcGIS Pro.

A Prototype of a GIS Full-Stack App for Community-Centered Preservation (*Webpage*, *Github*)

- Created a full-stack web app (RESTful API, NodeJS, Express, MongoDB) for collecting spatial data for community engagement.

Revitalizing Carbondale - A Community-Centered Preservation Plan (*Report*)

- Mapped the urban development in ArcGIS Pro and developed a community-centered revitalization plan for the city. Composed a report (InDesign) and created graphics (Photoshop & Illustrator) for presentation.

Frontend GIS Web App: Filtering Preservation-Related Spatial Database of Philadelphia (*Github*)

- Used HTML, Javascript, CSS, and Leaflet to load, process, and visualize GeoJSON data.

Feasibility Study - Robinson's Department Store, PA (*Report*)

- Studied comprehensively a commercial building's feasibility for redevelopment based on market analysis, pro forma analysis, public policy research, and stakeholder analysis using census, employment, and property data.

Penn Cloud - A Cloud Platform Based Multi-Server Architecture & Distributed Key-Value Store.

- Programmed a scalable distributed key-value pair database server in C & C++ (3 groups of servers, 3-node replication per group). Implemented load balancing, data partition, replication, fault tolerance, scalability, consistency, and leader election among nodes.