Xiaomai (Mia) Hu

Emeryville, CA | xiaomai_hu@berkeley.edu | +1(510)816-2049 |
Personal Website: https://xiaomaihu.github.io/portfolio/

Incoming GISer | Passionate about Infrastructure, Mobility, and Environmental Applications of Spatial Data

EDUCATION

University of California at Berkeley, Master of Architecture (GPA: 3.88/4.0) Expected **Dec 2025**
Graduate Certificate: Applied Data Science & Geographic Information Science and Technology
Coursework: *Geographic Information Science; Urban Informatics and Visualization; Principles and Techniques of Data Science; Research Design and Applications for Data and Analysis; Applied Machine Learning; Data Science for Smart Cities; CS61A; CS61B.*

Huazhong University of Science and Technology, Bachelor of Architecture (GPA: 3.91/4.0) **June 2022**
Coursework: *Measurement and Cartography; Principles of Microeconomics; Methods of Social Investigate and Research*

SKILLS

Programming: Python (Pandas, Geopandas , NumPy, Scikit-learn, TensorFlow, NetworkX), SQL, JavaScript, HTML/CSS
Geospatial Data Analysis: ArcGIS Pro (Network analysis, GTFS transit analysis, spatial statistics, raster analysis), ArcGIS Online; QGIS
Visualization & Mapping: Carto, Pover BI, Tableau, Python (Matplotlib, Plotly, Seaborn), Adobe Suite (PS, AI, ID), Web Mapping

PROFESSIONAL EXPERIENCE

Geospatial Data Analyst Intern | Shanghai Tongji Urban Planning & Design Institute **June 2024 - Aug 2024**
- *Conducted spatiotemporal & socio-economic analyses as foundational research for multiple urban planning studies.*
- *Managed and updated multi-source geospatial datasets to maintain database integrity and spatial accuracy.*
- *Built an LLM-powered code retrieval tool using Graph-RAG to enable efficient access to local planning regulations.*

Research & Design Intern| Perkins Eastman **Apr 2023 - July 2023**
- *Conducted site research and feasibility analysis for large-scale bids, synthesizing findings into presentation reports and videos.*
- *Led the interior design for an international school, prepared high-quality drawings sets for weekly client updates and design reviews.*

Research & Design Intern | URBANUS **July 2022 - Dec 2022**
- *Performed spatial analysis using ArcGIS to support a regional development proposal, integrating terrain and land use data.*
- *Supported academic publishing and competition proposals through research editing, graphics production, and layout design.*

RELEVANT PROJECT

Public Restroom Accessibility and Suitability Analysis in San Francisco |Python & ArcGIS **Dec 2024**
- *Cleaned and processed 311 feces complain reports and analyzed seasonal and spatial patterns.*
- *Used Random Forest and SHAP to identify key built environment and land use factors influencing feces report density.*
- *Created a suitability map to propose new restroom locations based on both demand prediction and walk-time accessibility gaps.*

Automated Disaster Types and Damage Levels Classifier |Python **Nov 2024 - Dec 2024**
- *Built ML pipelines to classify natural disaster events and assess post-disaster building damage using satellite imagery dataset.*
- *Extracted and engineered features (e.g. LBP, Gabor, RGB histograms) to boost classification accuracy and model interpretability.*

Transportation Accessibility and Impact Analysis in the Greater Bay Area, China |Python & ArcGIS **Jun 2024 - Aug 2024**
- *Collected and cleaned multi-source traffic data (road, airport, and port), socio-economic indicators, and facility locations.*
- *Applied buffer and cost surface analysis to evaluate transportation coverage and spatial equity across Zhuhai City.*
- *Built and visualized a population projection model to assess labor force demand and infrastructure investment priorities.*

Urbanization Patterns and Mechanisms in a High-Density Chinese Province |Python & ArcGIS **Jun 2024 - Aug 2024**
- *Integrated environmental and socio-economic datasets for spatial cluster analysis and regional typology mapping.*
- *Used spatial statistics and policy metrics to evaluate urban coordination and inform planning recommendations.*

LLM-Powered Urban Code Retrieval Tool |Python & FastAPI **Jun 2024 - Aug 2024**
- *Developed a localized document-to-query pipeline using LLMs and knowledge graphs to retrieve urban code interpretations.*
- *Fine-tuned and evaluated multiple LLMs to improve accuracy.*
- *Built a FastAPI backend for a WeChat-integrated chatbot providing searchable Q&A for planning regulations.*

Del Norte BART Station Area Affordable Housing Proposal |Interdisciplinary Studio **Jan 2024 - May 2024**
- *Developed a mixed-income housing strategy with financial modeling, feasibility evaluation, site planning and design.*
- *Engaged with the City of El Cerrito and AC Transit to align design proposals with real-world planning priorities. The project received first place in the James R. Boyce Affordable Housing Studio Competition.*