Gabriel Barrett

Urban Planning and Computer Science Student at MIT

⌂ Boston, MA ✉ ███████████ ☎ ███████████ 🌐 gbarrett101.github.io

Work Experience

MIT Transit Lab | Research Assistant
September 2022 - Present | Cambridge, MA

- ➜ Create models using survey, demographic, and land use data to predict what transit ridership in Chicago will look like under a post pandemic hybrid work paradigm
- ➜ Quantify the value of public transit examining the economic benefits of agglomeration that are associated with higher population density
- ➜ Simulate transportation demand in Chicago to see how reduced transit service impacts automobile vehicle miles traveled, roadway congestion, and air pollution

Boston Consulting Group | Summer Associate
June 2023 - August 2023 | San Francisco, CA

- ➜ Worked with a state Department of Transportation to establish a program to use state funds to help local organizations meet federal infrastructure grant match requirements
- ➜ Helped create public and internal dashboards to track infrastructure funding KPIs to make sure state is maximizing its potential federal funding
- ➜ Conducted spatial analysis and prepared presentation and memo for Governor's office highlighting areas of the state most in need of infrastructure funding assistance

Washington Metropolitan Area Transit Authority | Performance Analyst Intern
June 2022 - August 2022 | Washington, DC

- ➜ Designed algorithm in R that creates a network graph of the DC metro system which can represent in-train travel time, station walk time, headways, and transfers
- ➜ Ran shortest path algorithm on graph to analyze how service adjustments and disruptions would affect station-to-station travel time and rail on-time performance
- ➜ Automated process of retrieving bus and rail safety data from SQL databases to add to benchmarking dashboard built with PowerBI

MIT City Form Lab | Undergraduate Research Assistant
February 2022 - June 2022 | Cambridge, MA

- ➜ Modeled pedestrian flow around Los Angeles transit stations using Rhino3D to add to report on overall transit accessibility of the LA Metro system
- ➜ Assisted validation process for computer vision model that identifies sidewalks, roads, and crosswalks to create pedestrian network

Massachusetts Department of Energy Resources | Policy Analyst Intern
June 2021 - August 2021 | Boston, MA (Remote)

- ➜ Studied electric grid modernization plans around the country to create case study sheets to guide DOER policy recommendations
- ➜ Developed presentation on the benefits and consequences of allowing for the intervention public utilities into the private electric vehicle market

Arlington County Deptartment of Environmental Services | Transportation Planning Intern
June 2021 - August 2021 | Arlington, VA

- ➜ Coordinated interagency meetings to collect input on the county's bike infrastructure benchmarks and compiled findings into a one pager
- ➜ Reviewed and summarized public feedback for bike network in rapidly growing National Landing BID

Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Master in City Planning
Expected June 2024 | Cambridge, MA

S.B. Urban Science and Planning with Computer Science
June 2023 | Cambridge, MA
Spanish Studies Minor
GPA: 5.0 / 5.0

Skills

PROGRAMMING

Proficient:
Python • Java

Experienced:
R • LaTeX

Familiar:
JavaScript • HTML

LIBRARIES/FRAMEWORKS

Pandas • PyTorch • Django

SOFTWARE

QGIS • ArcGIS • Rhino3D • Tableau • Eclipse SUMO • Excel

LANGUAGES

English (Native)
Spanish (Fluent)

Coursework

Spatial Analysis
Machine Learning
Pedestrian Modeling
Statistics and Data Analysis
Software Construction
Algorithms
Public Policy
Negotiations

Interests

Maps and Map-making • History • Public Transit • Playing Saxophone • Basketball