

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, headways, and transfers
- Ran shortest path algorithm on graph to develop a baseline matrix of origin-destination pair expected run times to measure on-time performance of the rail system
- 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 Department 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 • L^AT_EX

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