

# Gabriel Barrett

Urban Planning and Computer Science Student at MIT



Boston, MA



gbarrett101.github.io

## EXPERIENCE

### WMATA (DC METRO) | PERFORMANCE ANALYST INTERN

June 2022 - Present | Washington, DC

- Design algorithm in R that creates a network graph of the metro system. Use graph to develop a baseline matrix of origin-destination pair expected run times to measure rail on time performance
- Automate process of retrieving bus and rail safety data from SQL databases to add to benchmarking dashboard built with PowerBI
- Study equity initiatives from other US transit agencies to gauge WMATA's progress

### MIT CITY FORM LAB | UNDERGRADUATE RESEARCHER

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

### METROPOLITAN AREA PLANNING COUNCIL | ECONOMIC DEVELOPMENT INTERN

March 2021 - June 2021 | Boston, MA (Remote)

- Wrote program to gather local business information in certain central business districts to develop post pandemic recovery plans
- Performed case studies on nationwide small business assistance programs to help local woman- and minority-owned businesses

### MOVE MINNESOTA | DATA SCIENCE INTERN

Sep 2020 - Jan 2021 | St. Paul, MN (Remote)

- Drafted a report on the effects of the Minneapolis parking minimum policy on climate pollution, housing availability, and city expenditures
- Wrote brief fact sheets explaining how transit access intersects with social issues such as economic mobility, racial equity, and affordable housing

### MIT LIVING WAGE CALCULATOR | UNDERGRADUATE RESEARCHER

June 2020 - August 2020 | Cambridge, MA (Remote)

- Collected and performed spatial analysis on nationwide childcare cost data

## EDUCATION

### MASSACHUSETTS INSTITUTE OF TECHNOLOGY

MASTER IN CITY PLANNING

Expected Jun 2024 | Cambridge, MA

S.B. URBAN SCIENCE AND PLANNING  
WITH COMPUTER SCIENCE

Expected Jun 2023 | Cambridge, MA

Spanish Studies Minor

GPA: 5.0 / 5.0

## SKILLS

### PROGRAMMING

Proficient:

Python • Java

Experienced:

R • L<sup>A</sup>T<sub>E</sub>X

Familiar:

JavaScript • HTML

### LIBRARIES/Frameworks

Pandas • Django • PyTorch

### SOFTWARE

QGIS • ArcGIS • Rhino3D •  
Tableau • Excel

### LANGUAGES

English (Native)

Spanish (Fluent)

## COURSEWORK

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

## INTERESTS

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