

A red and white Metro Rapid bus is shown from a side-front angle, blurred to suggest motion. The word "Rapid" is prominently displayed on the side. The title text is overlaid on the center of the bus.

Rapid Bus Service Allocation in Los Angeles

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Introduction

- Metro Rapid bus service in Los Angeles - a step up from typical local buses
- What areas are underserved by premium services?



Methodology

Metro
GTFS

agency.txt
as csv
calendar_dates.txt
calendar.txt
routes.txt
shapes.txt
stop_times.txt
stops.txt
transfers.txt
trips.txt

Custom Python
Script

```
def stopCounter(tripsOfInterest, allStops):
    csvfile = open("stop_times.csv")
    thisReader = csv.DictReader(csvfile)

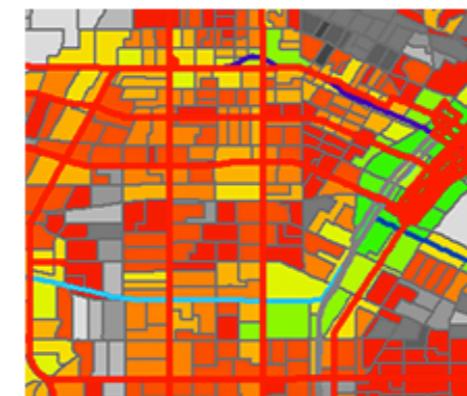
    tripsOfInterest_id = getTripIDs(tripsOfInterest)

    for entry in thisReader:
        if entry['trip_id'] in tripsOfInterest_id:
            for stop in allStops:
                if stop['stop_id'] == entry['stop_id']:
                    routeAtStop = getRouteID(entry['trip_id'])
                    if routeAtStop in stop.keys():
                        stop[routeAtStop] += 1
                    else:
                        stop[routeAtStop] = 1

    return allStops
```

Frequency
Table

STOP_ID	TOTAL	r704	r705	r710	r720	r728	r733	r740	r741
1282	33								
1283	117							117	
1291	52								
1295	172							172	
1296	54	54							
1298	38	38							
1323	52								
1326	36								
1331	52								
1411	42								
1425	97								
1429	0								



FINAL MAP

TIGER/Line
Block Groups

Transit Stops
Shapefiles

Metro Line
Shapefiles

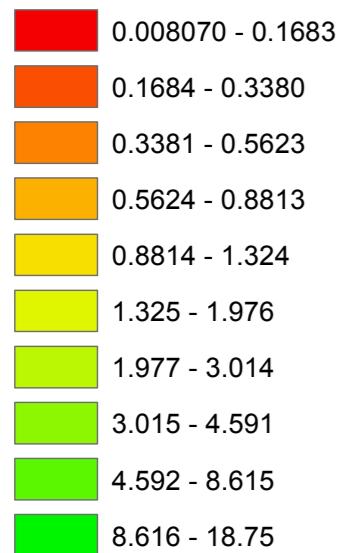
Legend

Transit Lines

- Rapid Bus Lines
- Silver Line (BRT)
- Orange Line (BRT)
- Red & Purple Lines
- Green Line
- Gold Line
- Expo Line
- Blue Line

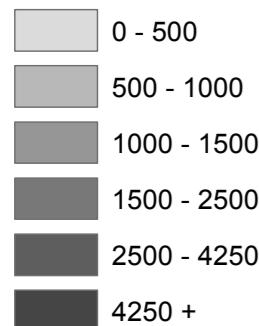
Rapid+ Service Index

Arrivals per Day / Population per Sq. Mile



No Rapid+ Service

Population per Square Mile



Map created by
Lucas Smith, May 2014.
Data from LACMTA and
U.S. Census Bureau
(American Community Survey,
TIGER/Line).

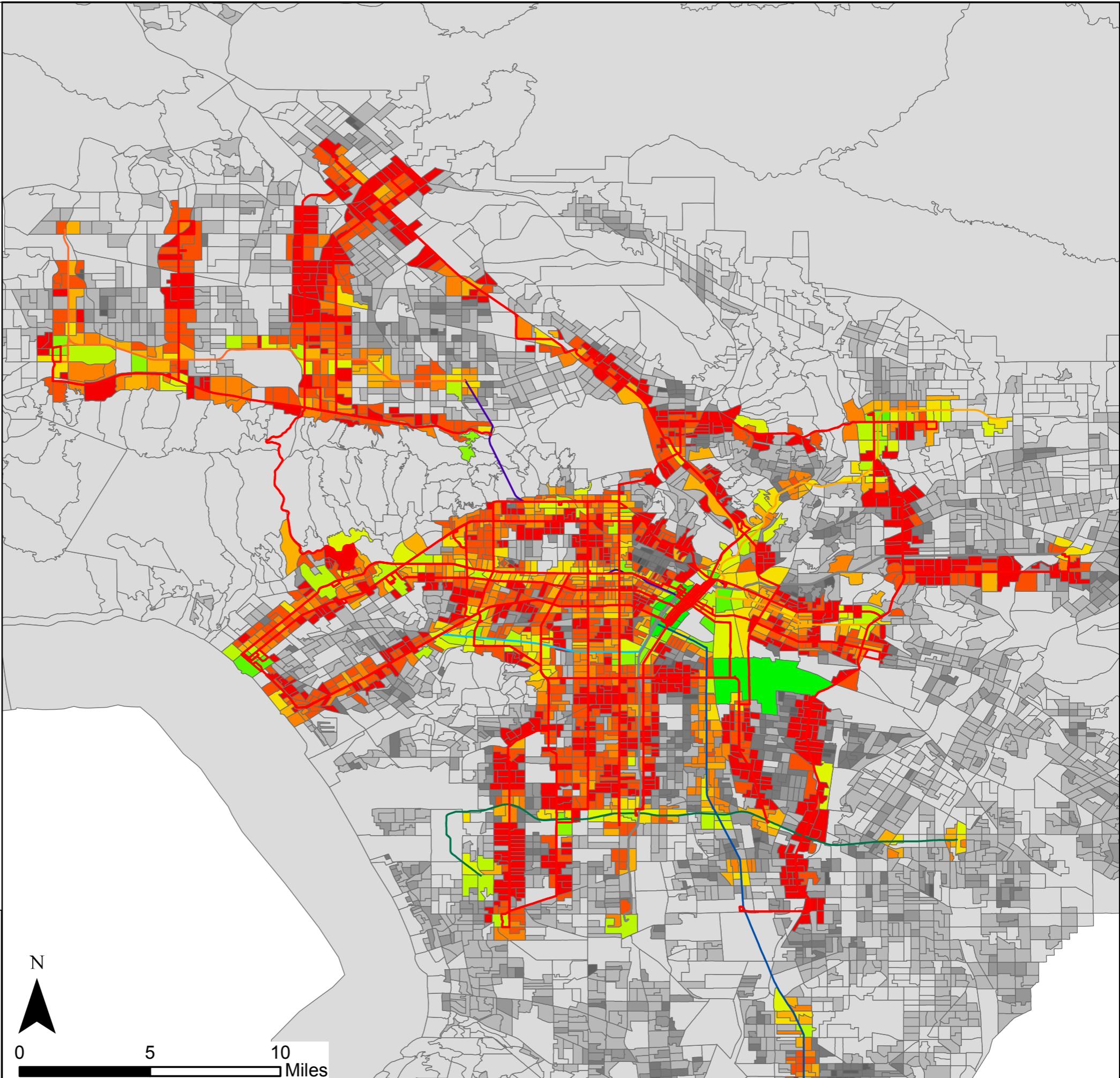


0

5

10

Miles



Questions

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