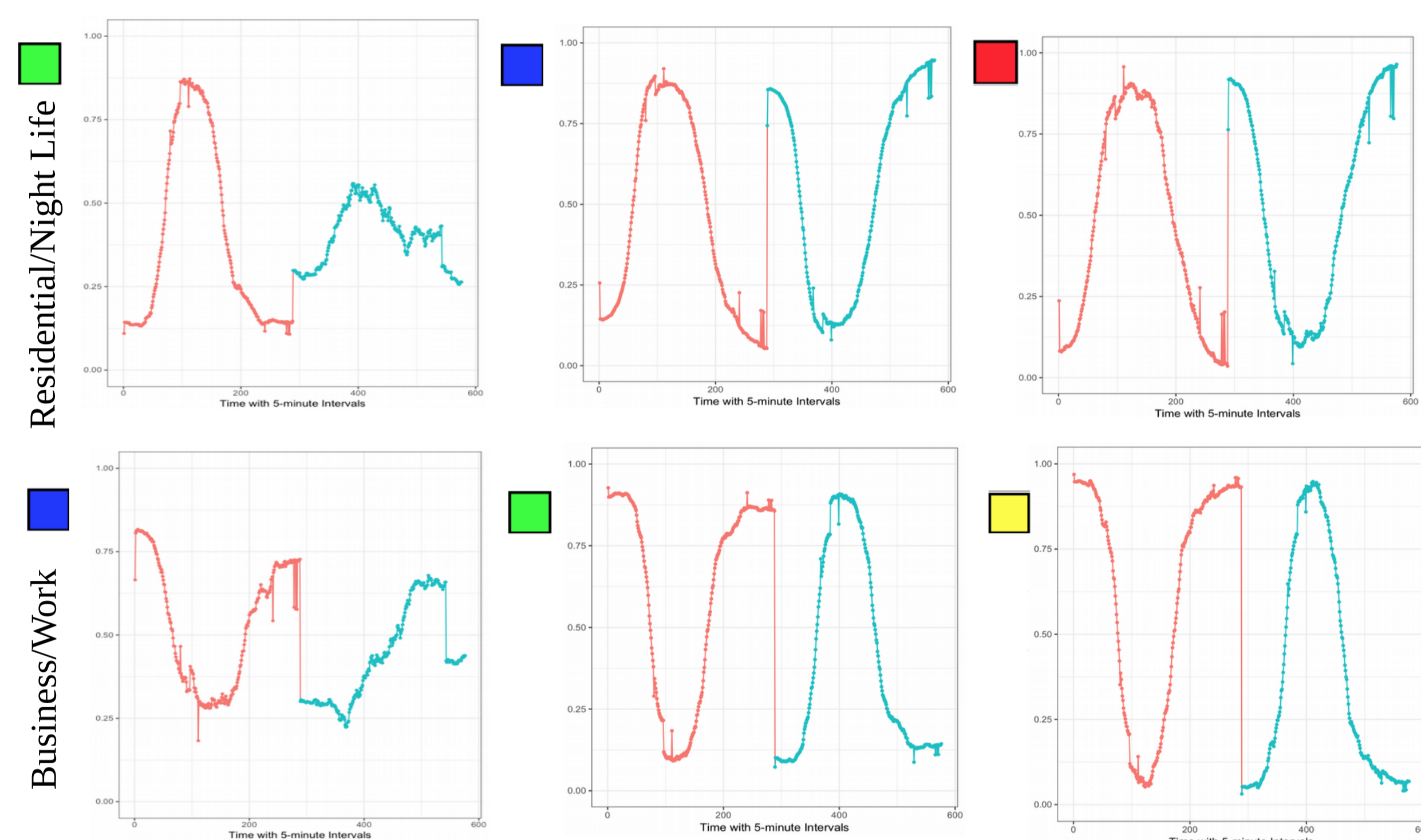


# Toward Identifying Neighborhoods: Activity-based Clustering Analyses



Myeong Lee, Rajat Aghi, Grant McKenzie

## RQ1: Can Transportation Patterns Be Used to Differentiate Activity Regions Within a City?

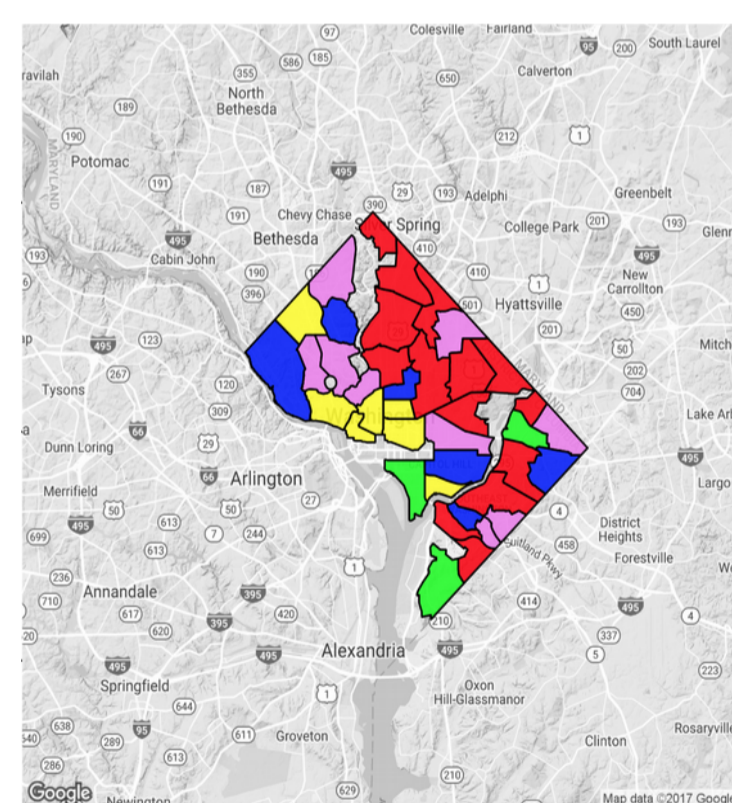
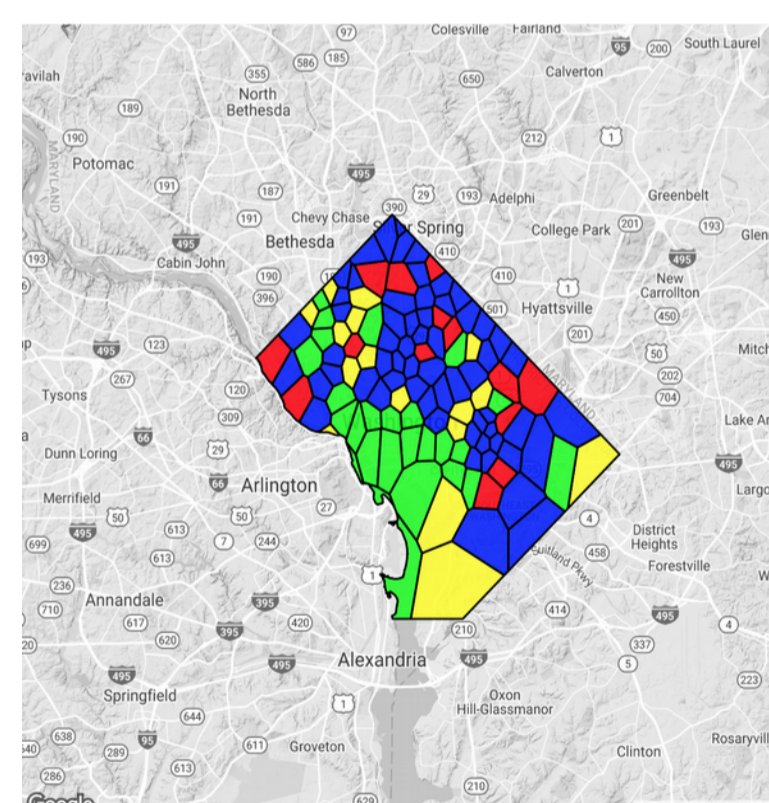
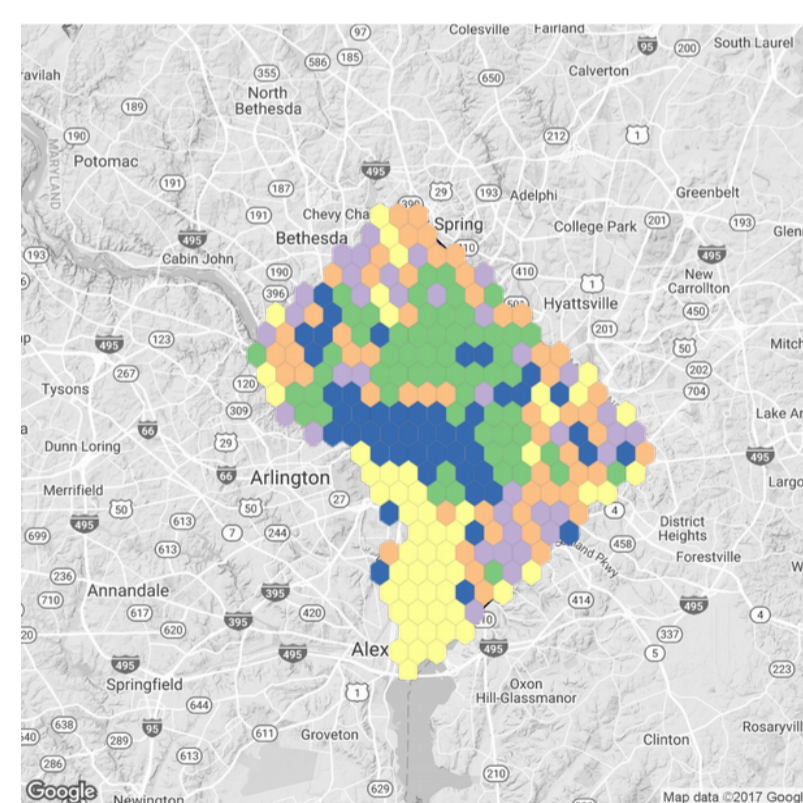


Clusters based on Car2Go's Temporal Signatures

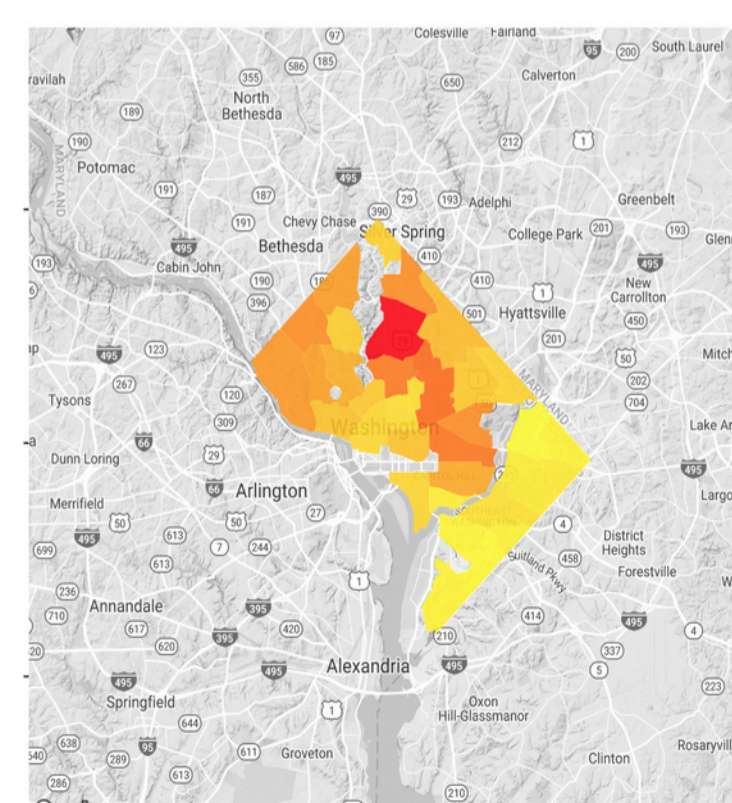
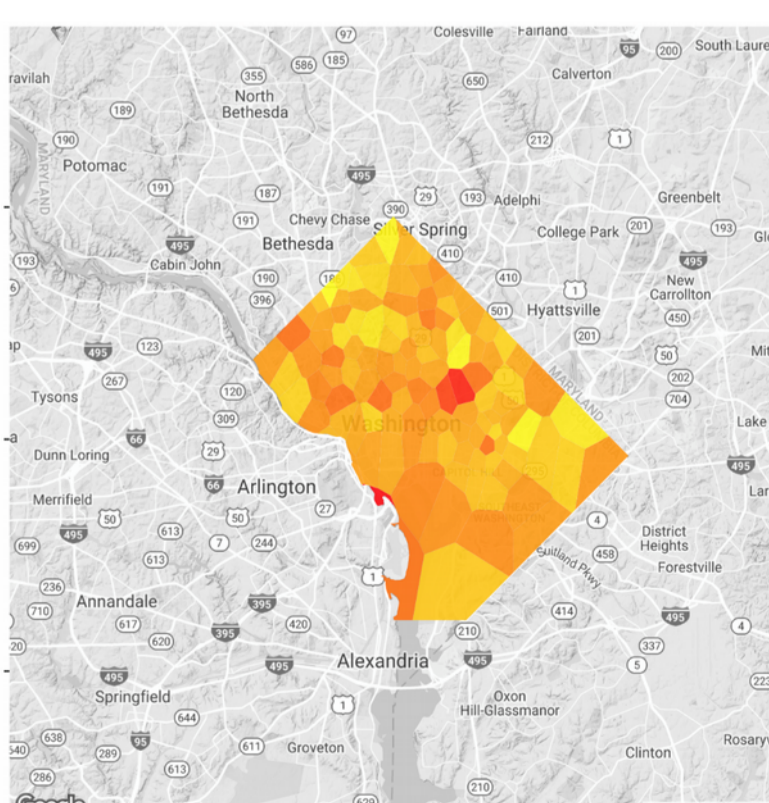
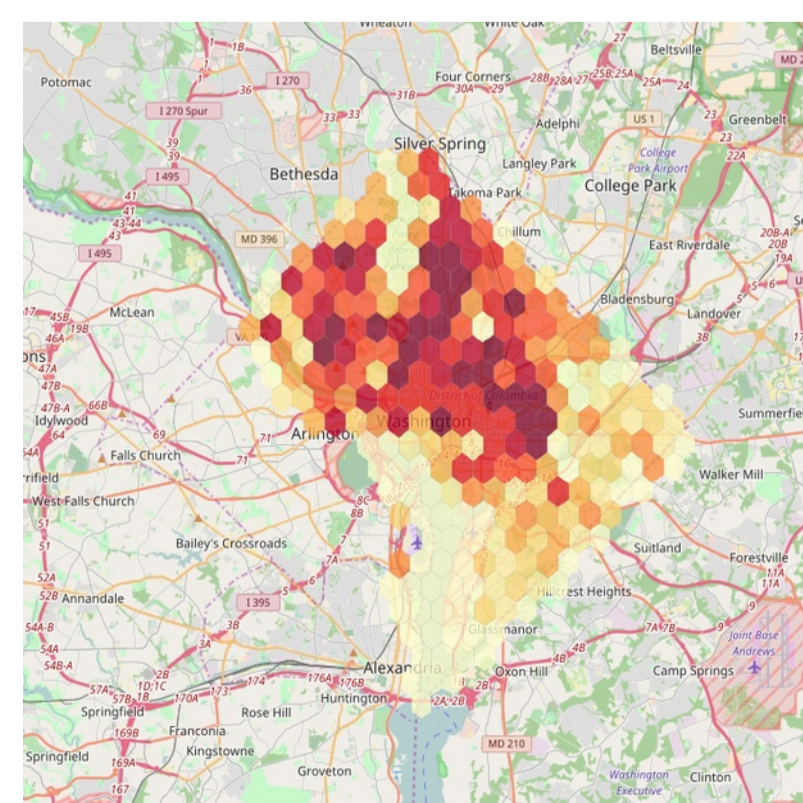
### Hexagon Overlay

### Voronoi Diagram

### Municipal Boundaries



Car2Go Density Maps



## Motivation

Neighborhood boundaries are traditionally defined based on the demographics of a region of a city as well as socio-institutional affordances of these regions.

We propose to explore **'activity neighborhoods'** based on the how inhabitants of a city interact with regions via various modes of mobility.

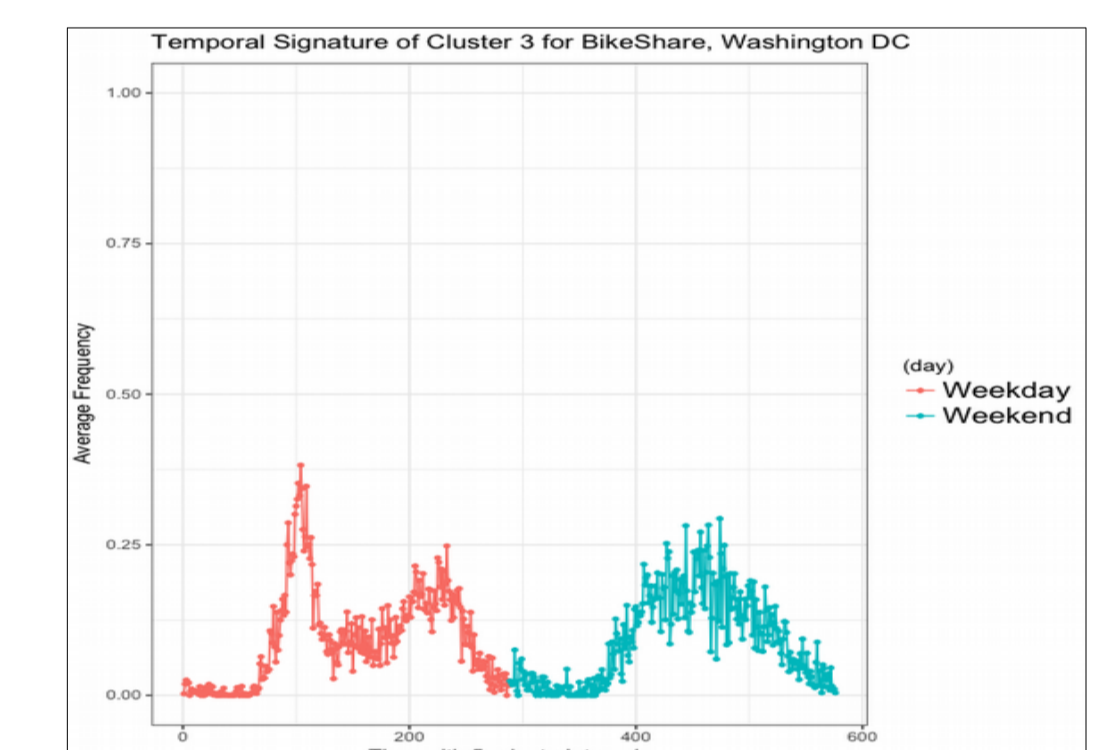
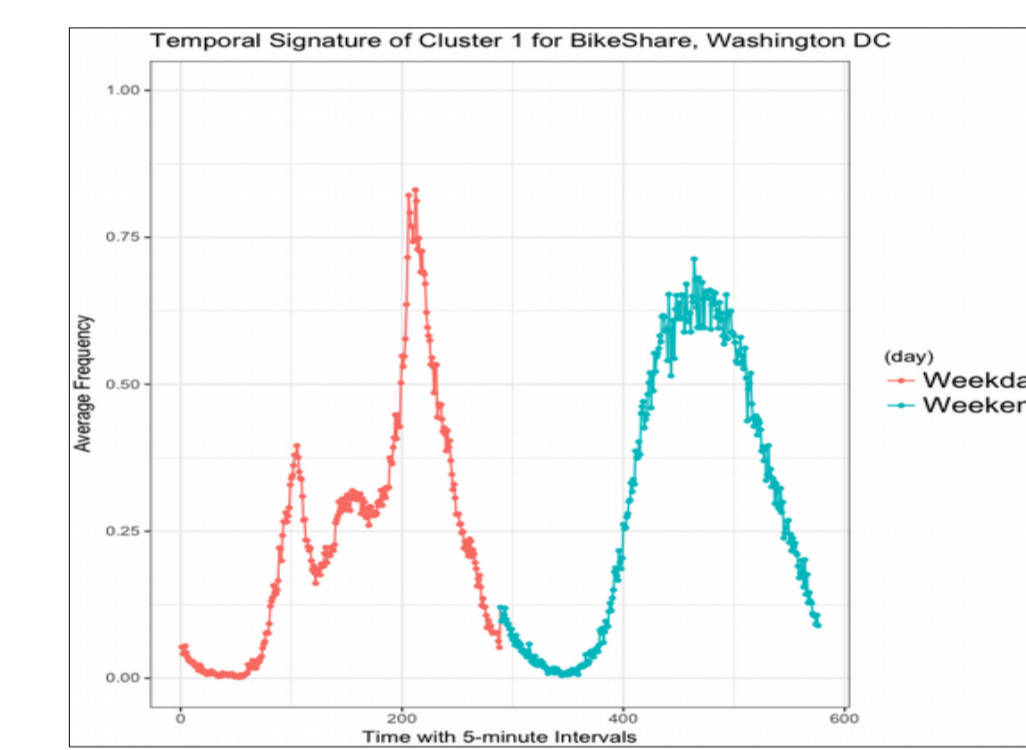
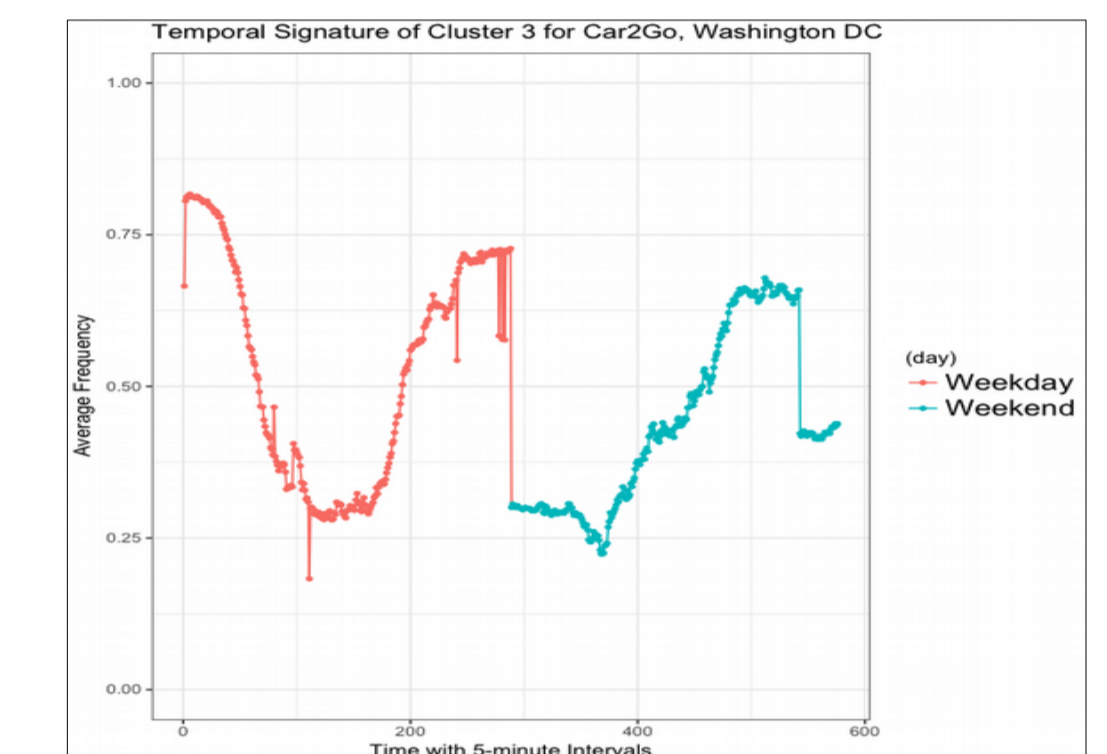
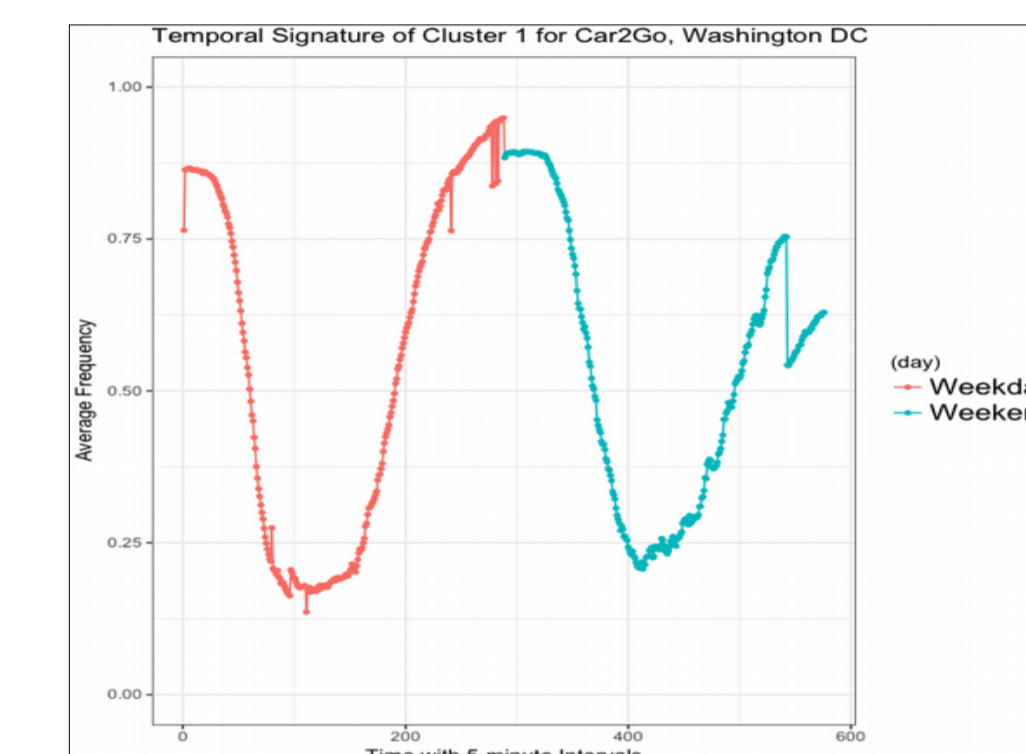
## Implications

- Different types of mobility data indicate different aspects of neighborhoods.
- Resolution of the signatures influences the shape of neighborhood boundaries.

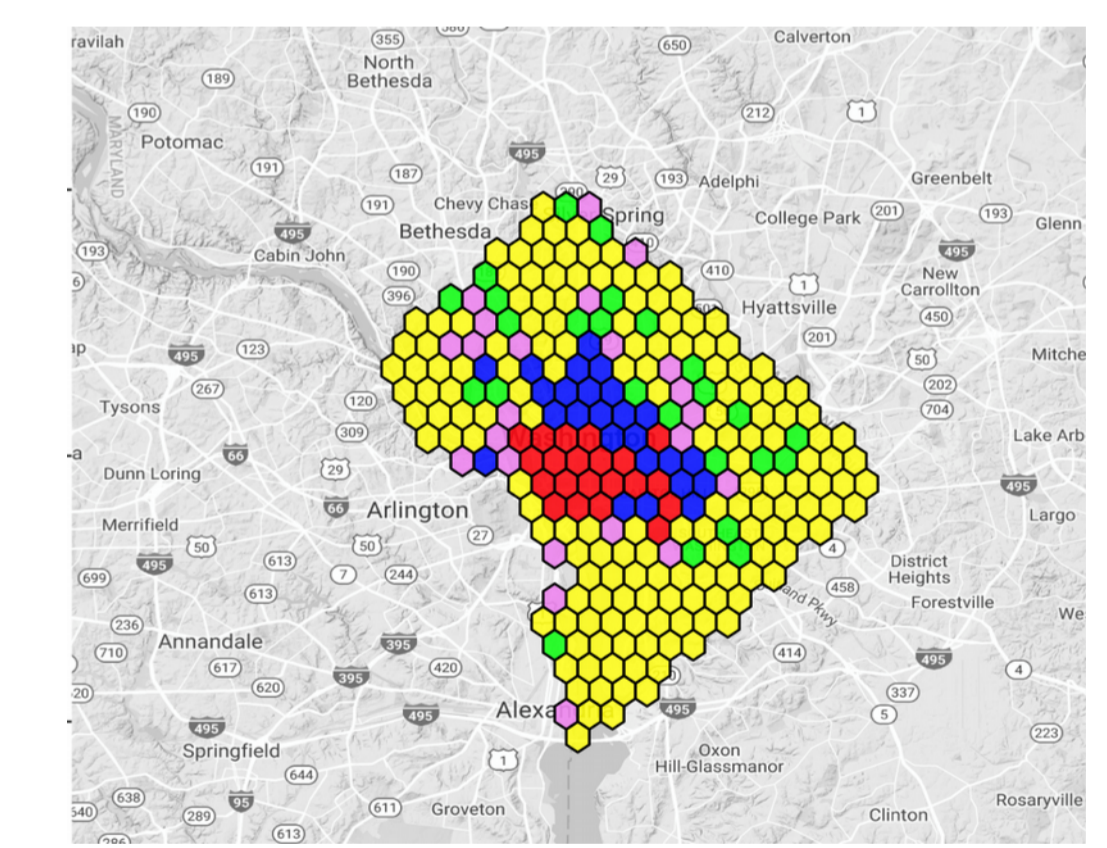
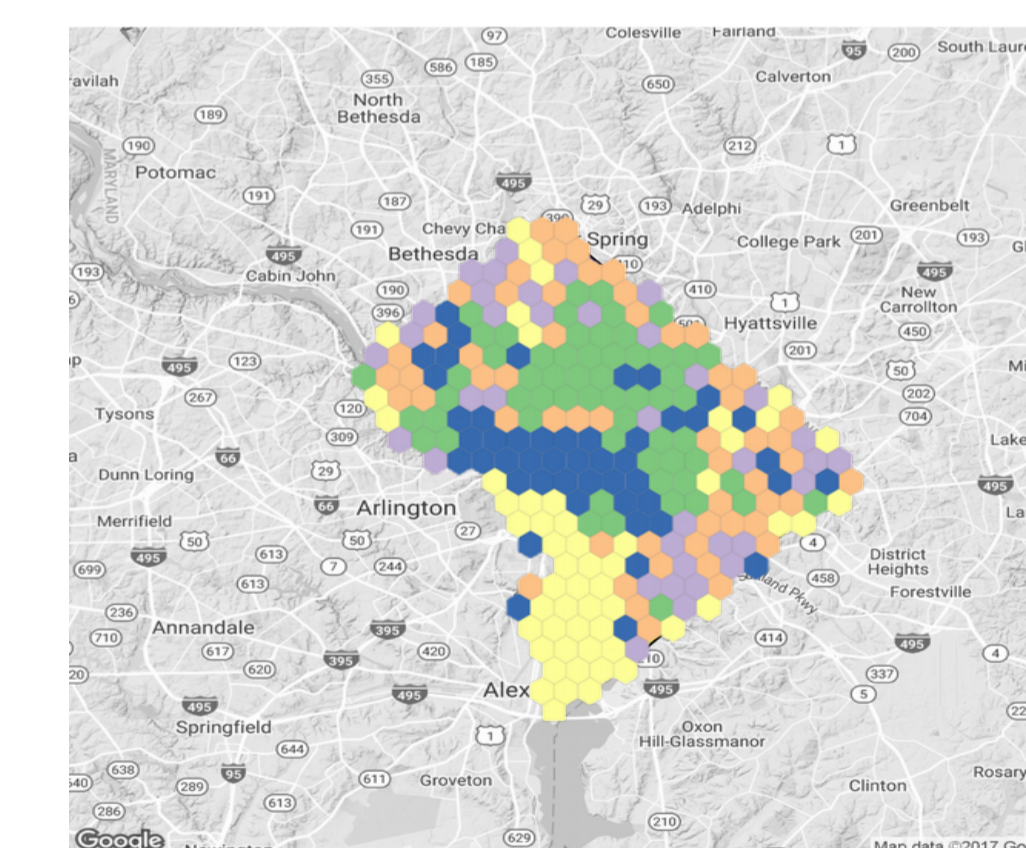
## Future Work

- To compare these neighborhoods to existing boundaries from a variety of sources.
- Adjusting resolution of the signatures to determine their influence on regional boundaries.

## RQ2: Is there a notable difference between neighborhood regions identified via different modes of transportation?



Car2Go Vs. Capital Bike Share temporal signature based clustering



Car2Go Vs. Capital Bike Share Density Maps

