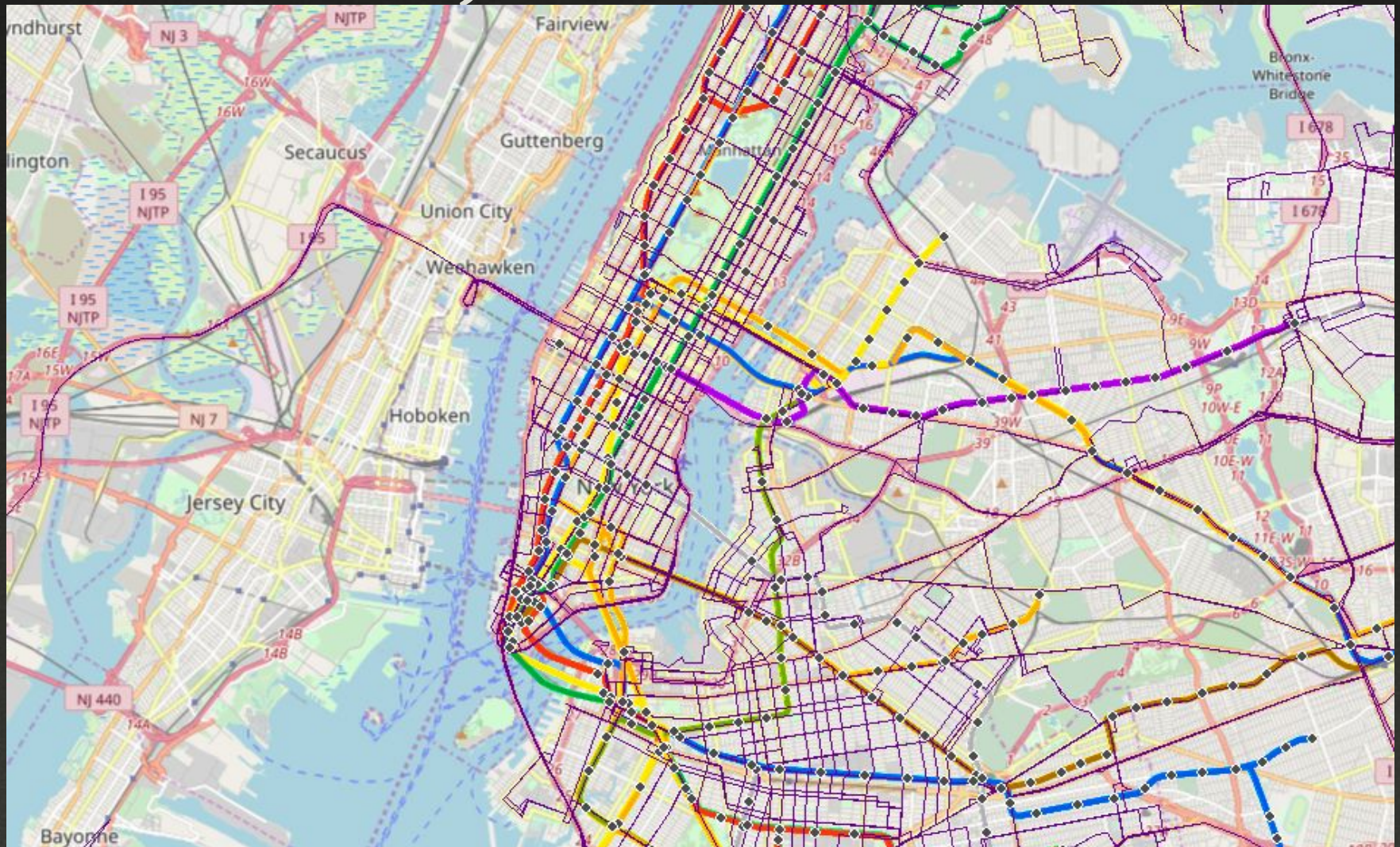


Project Benson



Curtis Neiderer Jennifer Phan

Objective



Identify optimal subway station locations to place street teams in order to increase attendance at WomenYesWomenTech (WYWT) annual gala held early summer as well as to increase the likelihood of donations to the organization.

Assumptions



- WYWT Annual Gala will be held mid-June 2018
- Street team fundraising will target March through June 2018
- Target Audience:
 - Higher Education
 - Wealthy Donors
 - Ages 25 - 65
- Streets teams able to cover at least 10 stations

Data



- Weekly MTA Turnstile Data
 - Data from 2015 to 2017 during March thru June
- US Census Data (from Ersi)
 - 2015 Median Household Income
 - Education Attainment
 - Households Total +200K (25 - 65)

Metrics

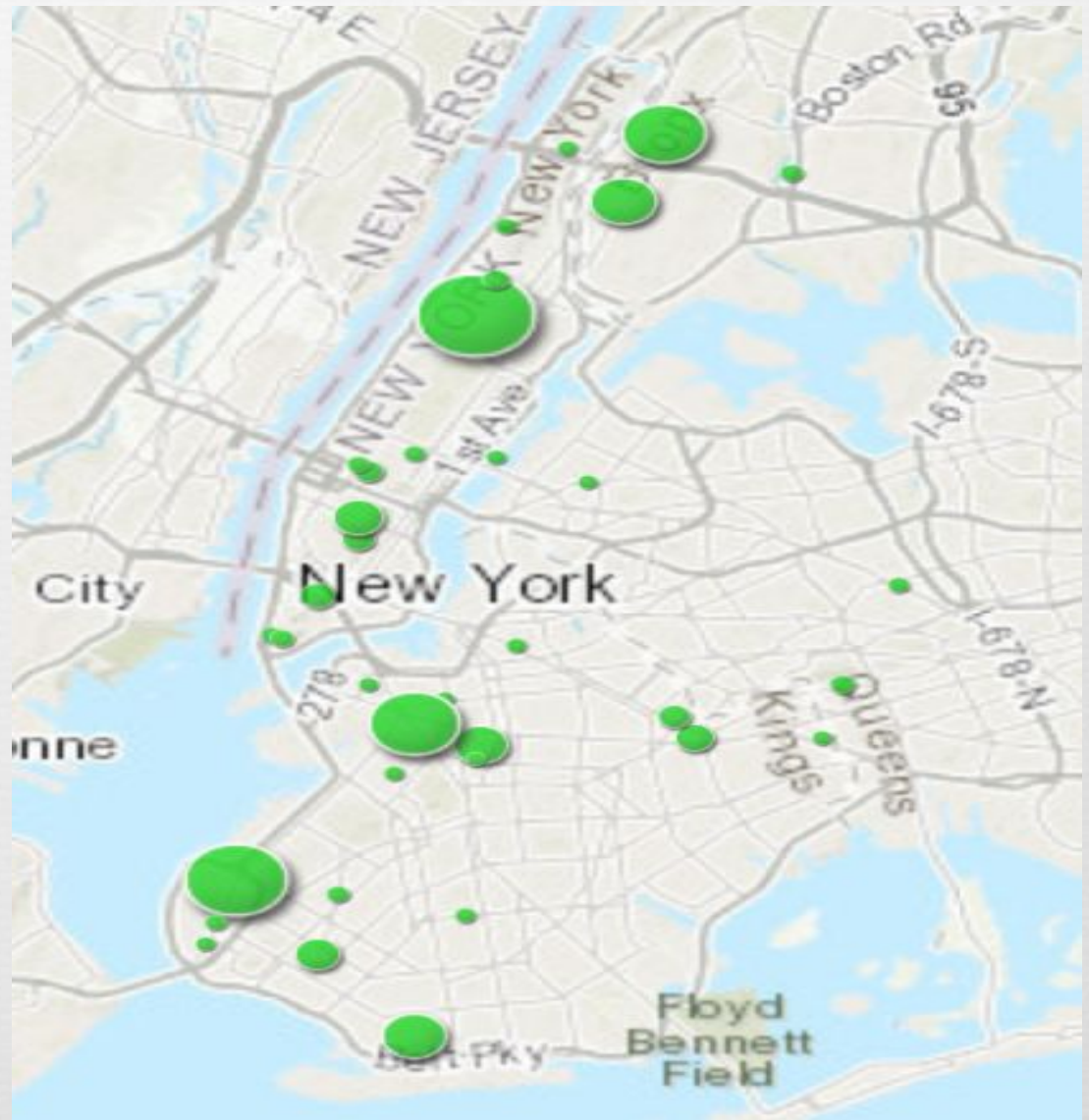


- Foot Traffic
- Median Household Income
- Wealthy Donors
- Educational Degrees

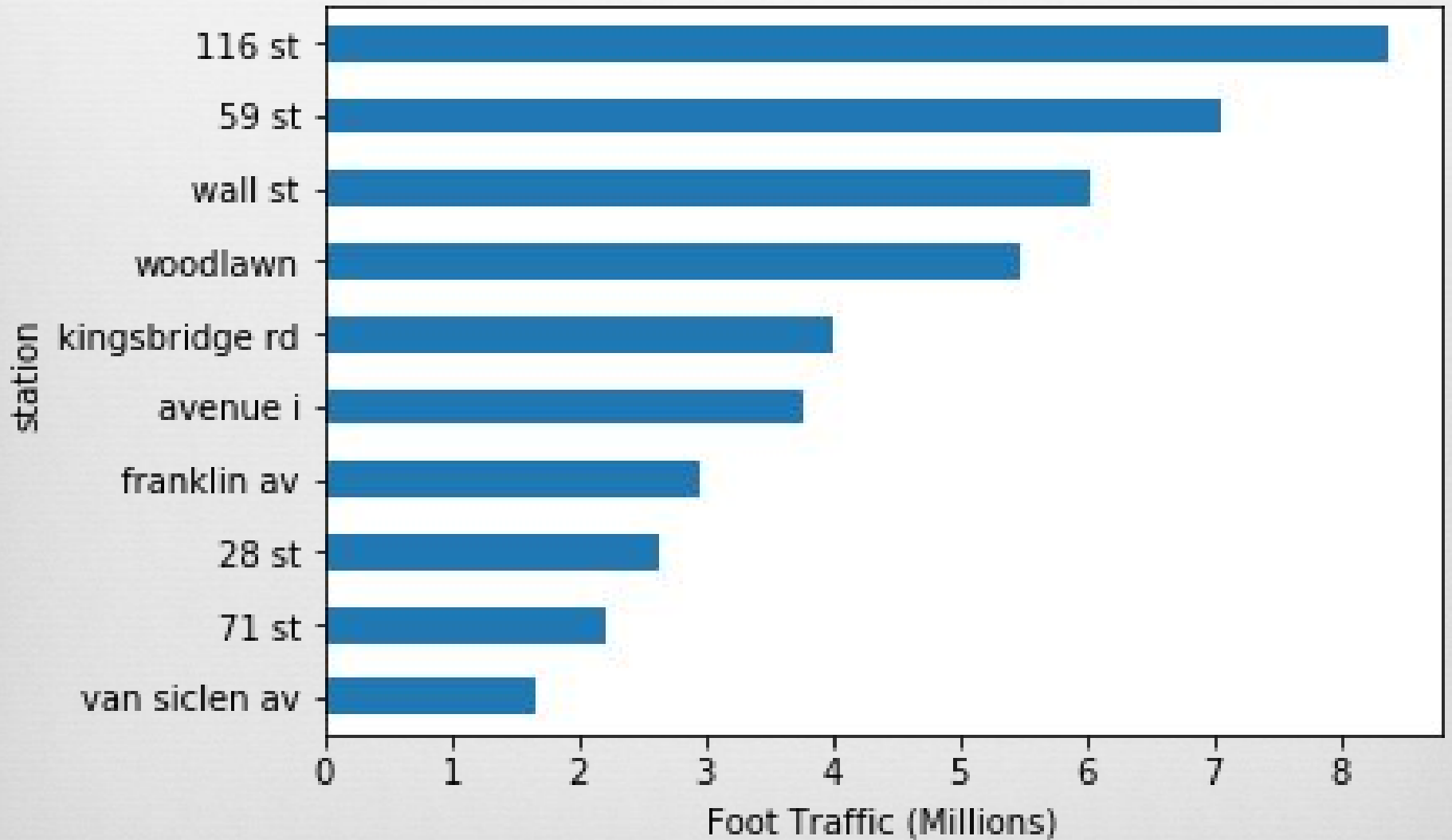
Exploratory Analysis



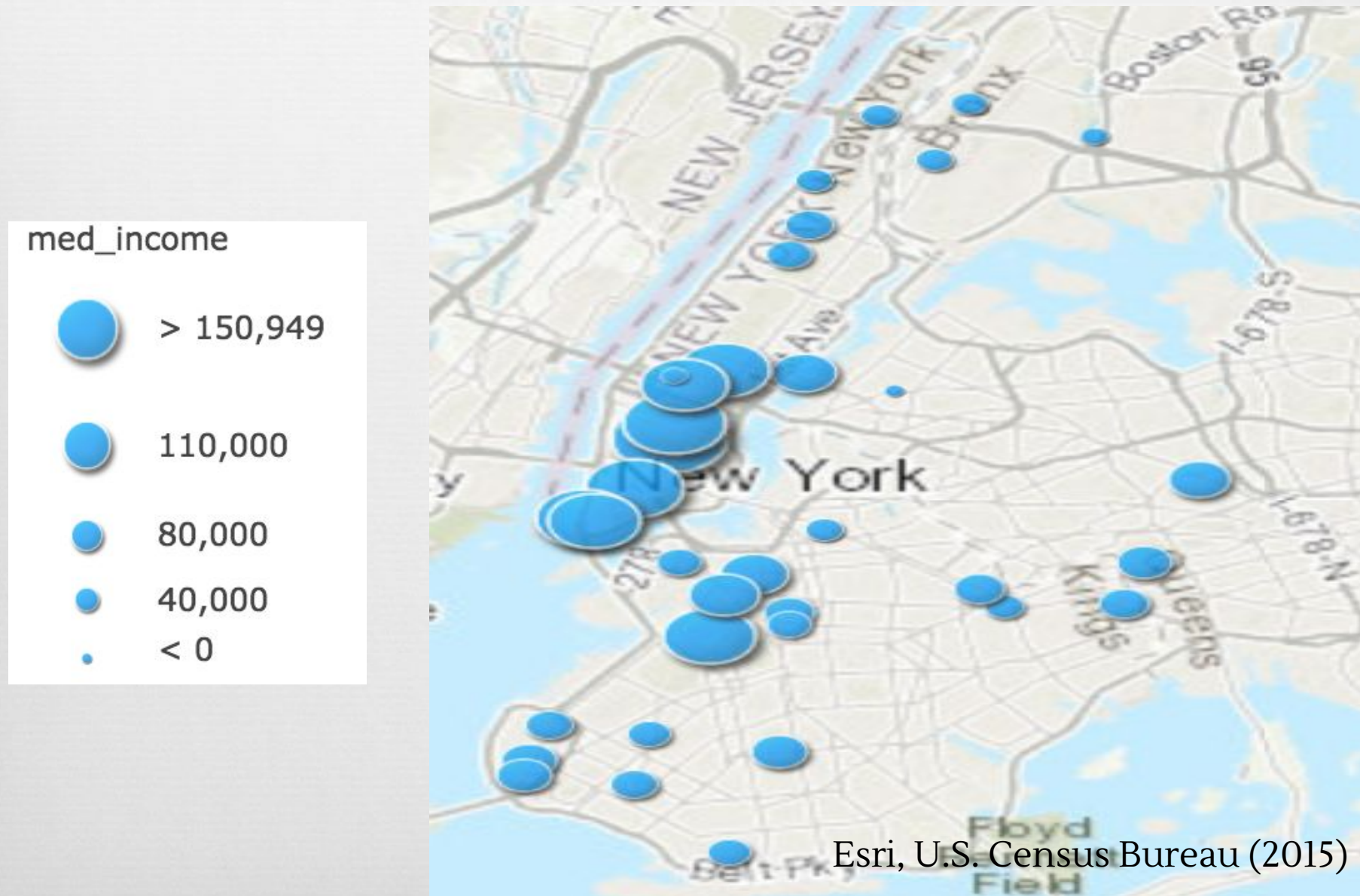
Foot Traffic



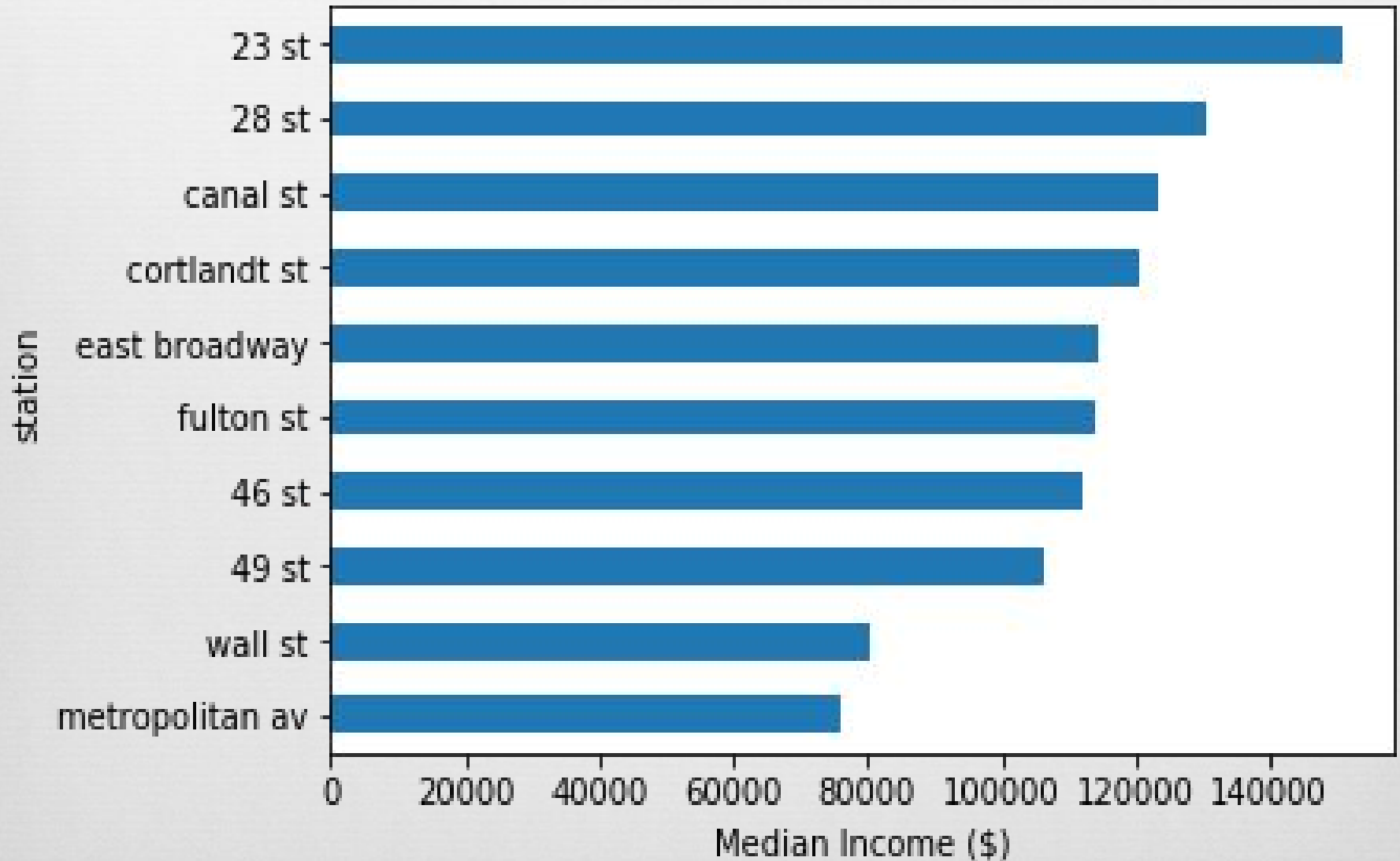
Top 10 Stations by Foot Traffic



Median Household Income



Top 10 Stations by Median HH Income



Total Households +200K Ages (25 - 65) (2015)

200k_income_pct

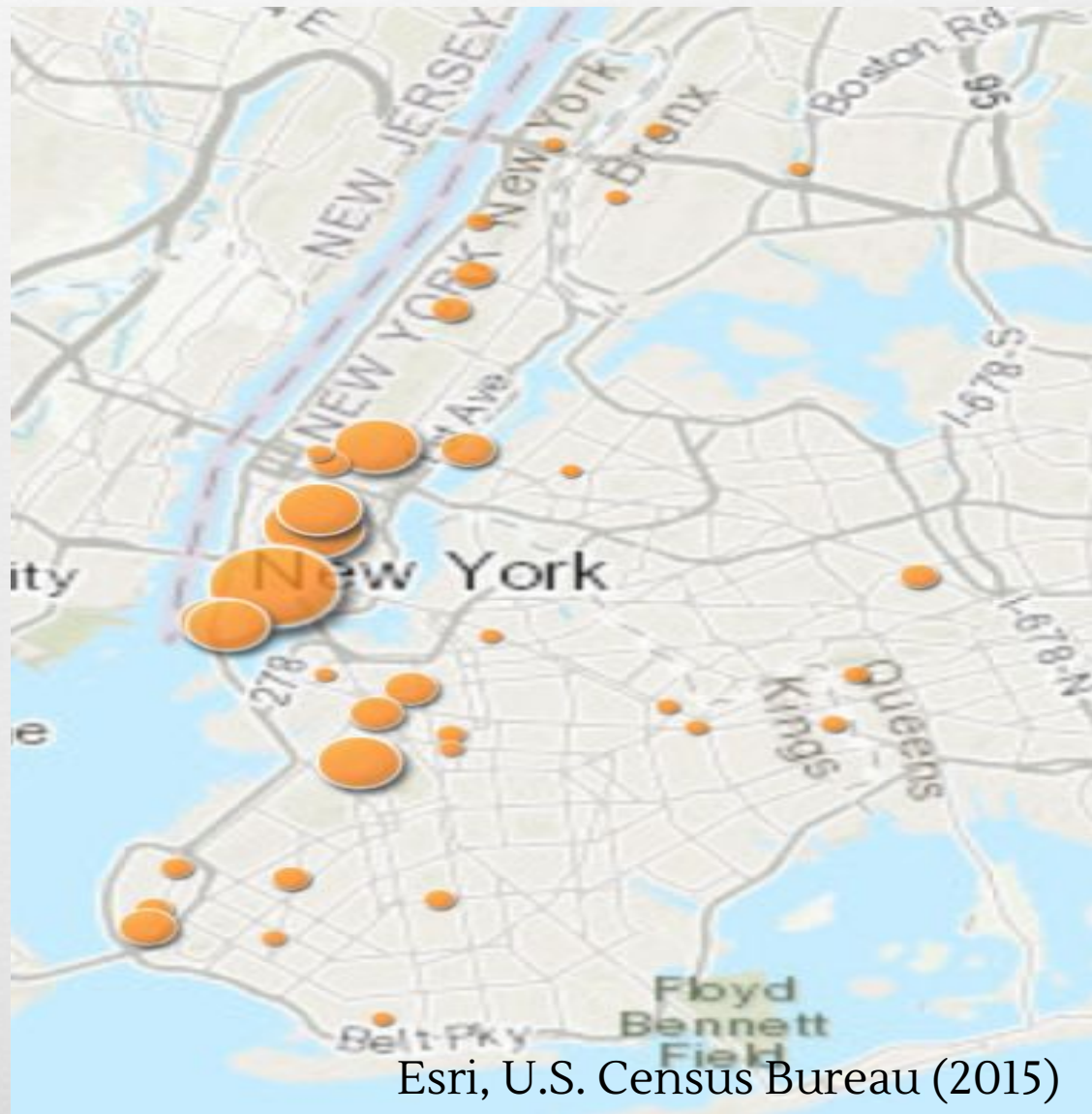
 > 0.38

 0.3

 0.2

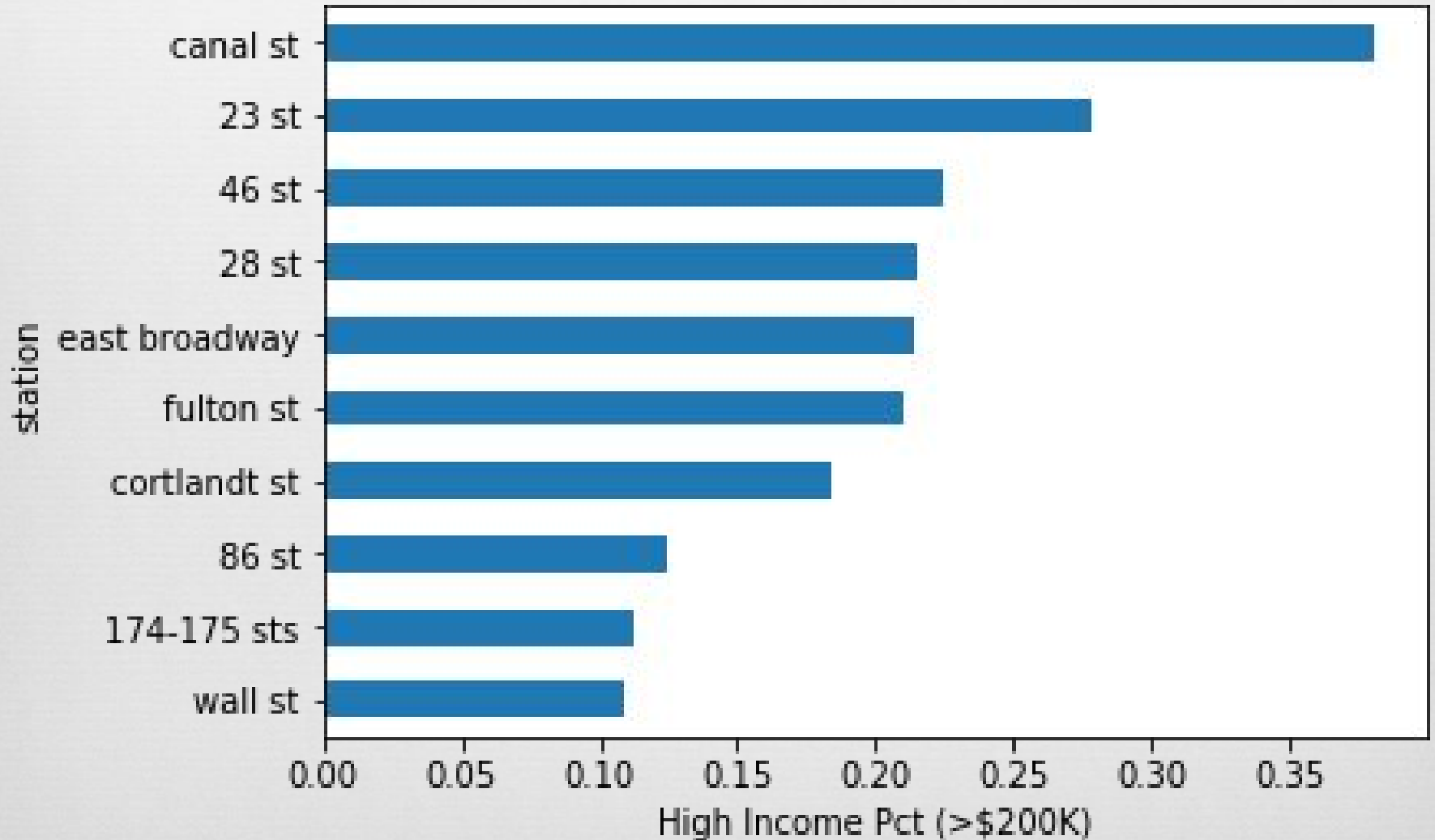
 0.09

 < 0

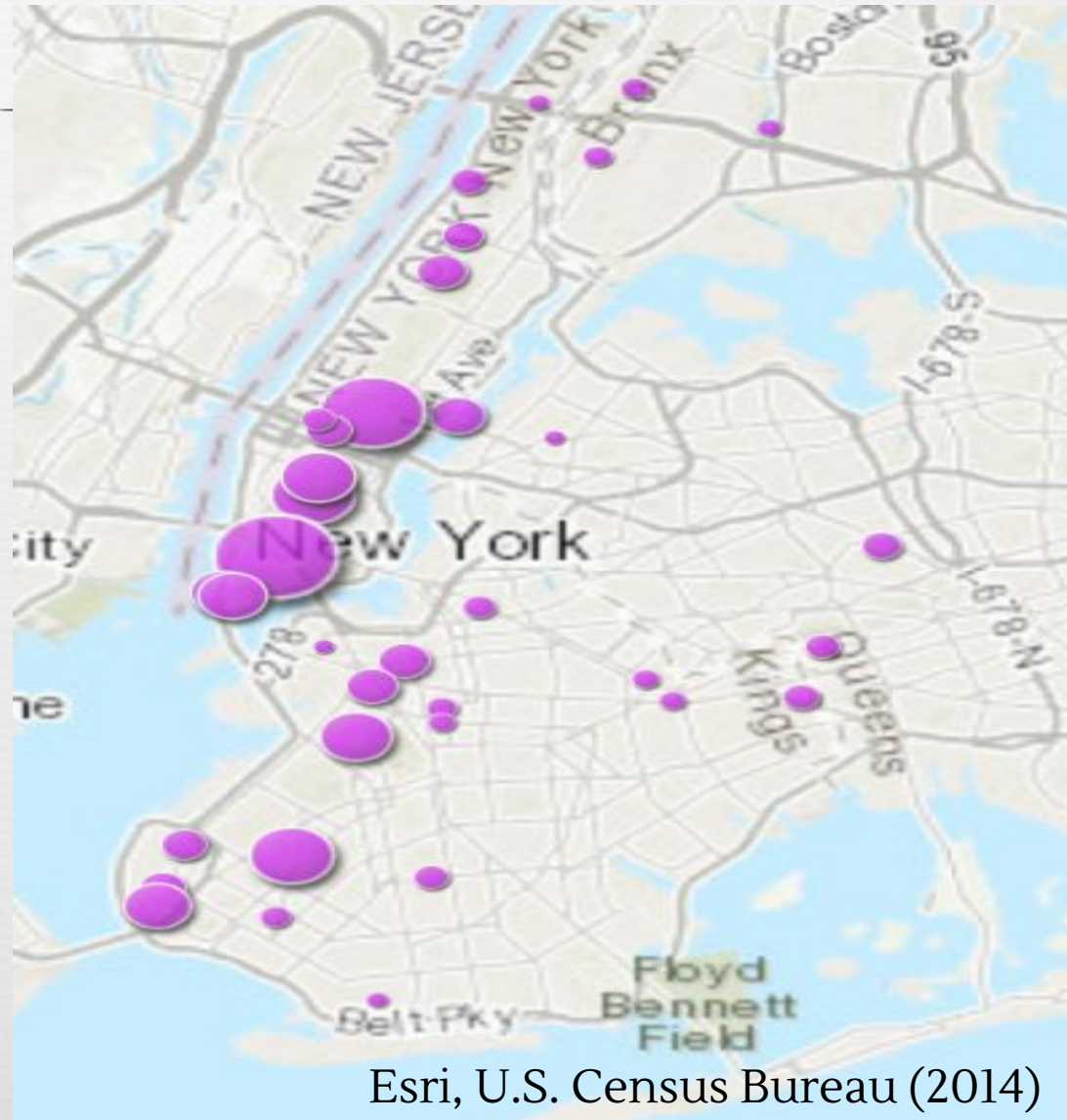
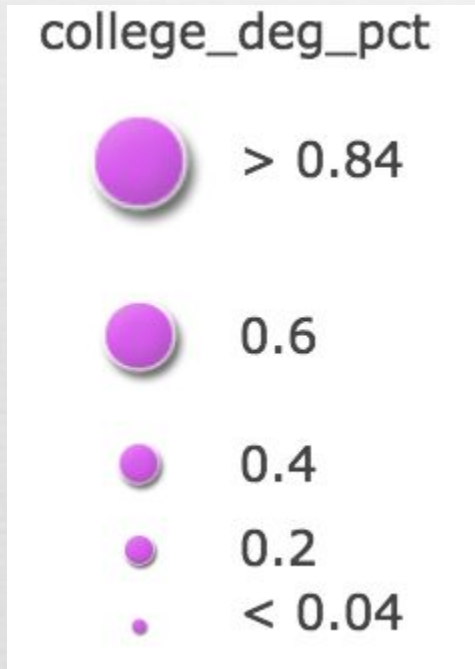


Esri, U.S. Census Bureau (2015)

Top 10 Stations by Wealthy Donors

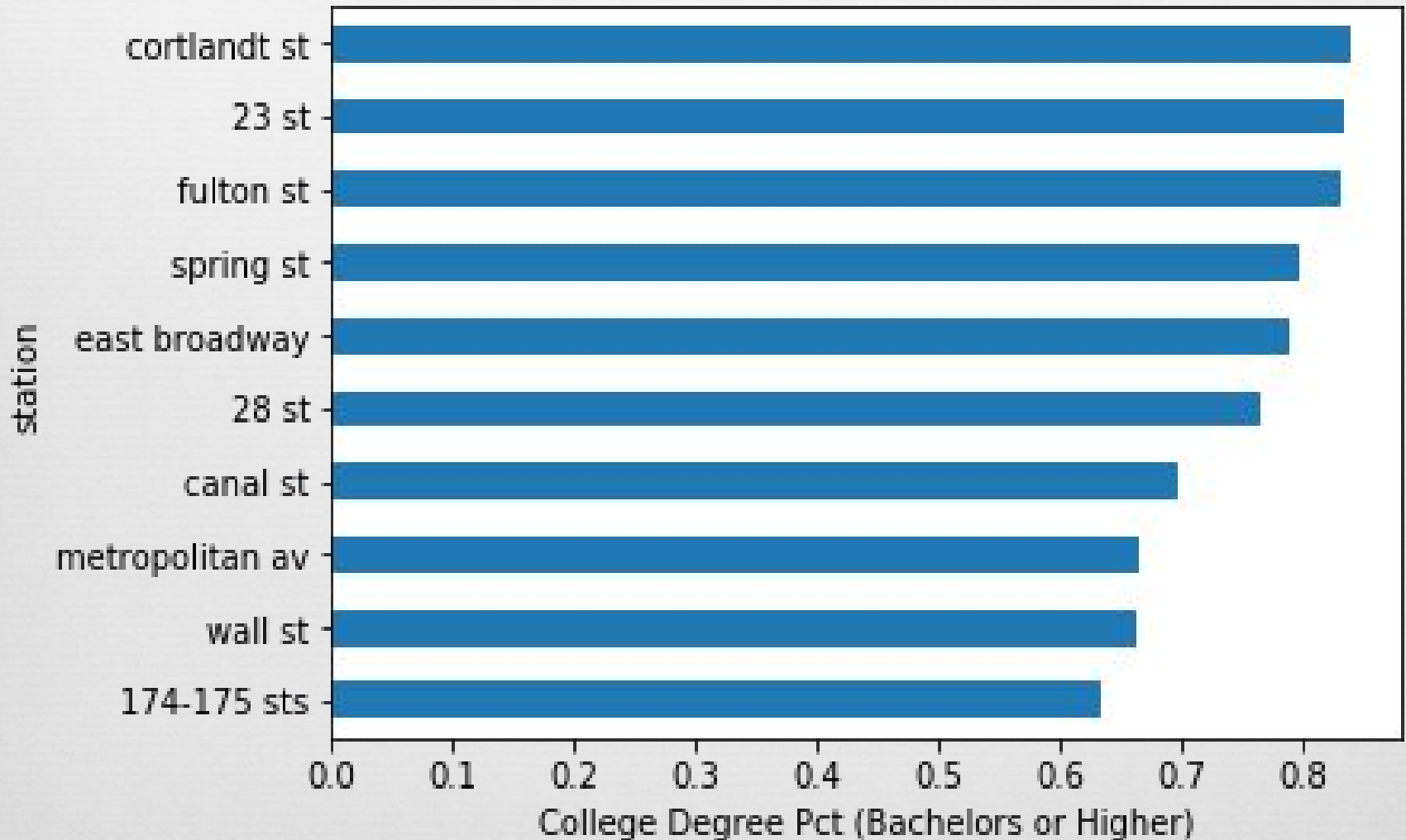


Education Attainment



Esri, U.S. Census Bureau (2014)

Top 10 'Educated' Stations

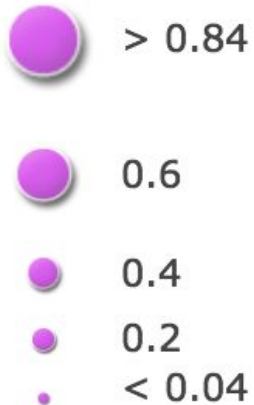


Combining Metrics to Score Station Value



Combining Metrics

college_deg_pct



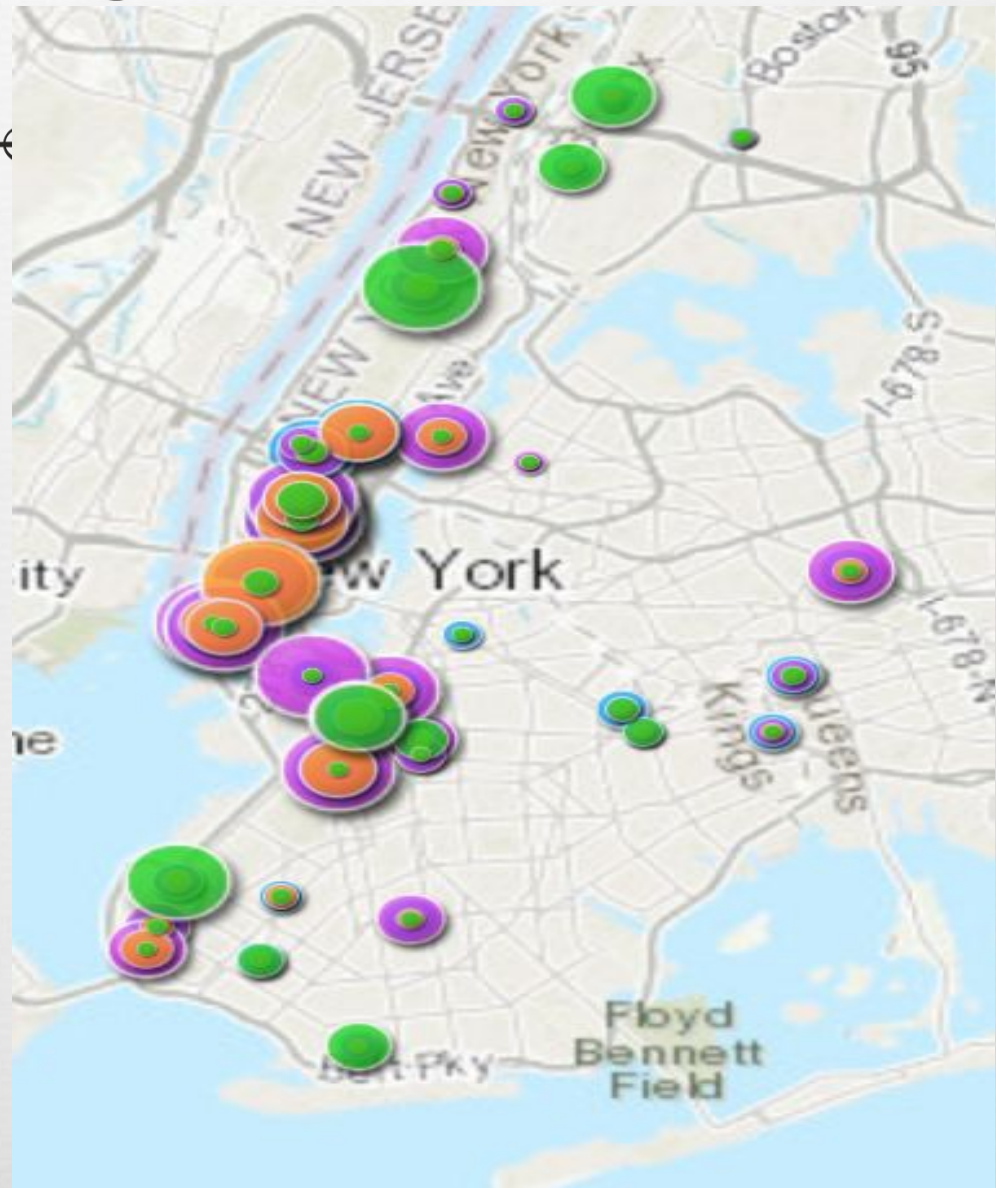
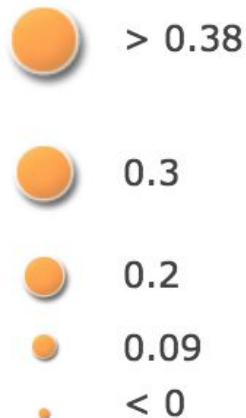
med_income



foot_traffic



200k_income_pct



Scoring



$$\begin{aligned} &\text{Foot Traffic} * (.50) + \\ &\text{Median Household} * (.10) + \\ &\text{Wealthy Donors} * (.10) + \\ &\text{Education} * (.30) \end{aligned}$$

= Station Value

Station Values

station_value

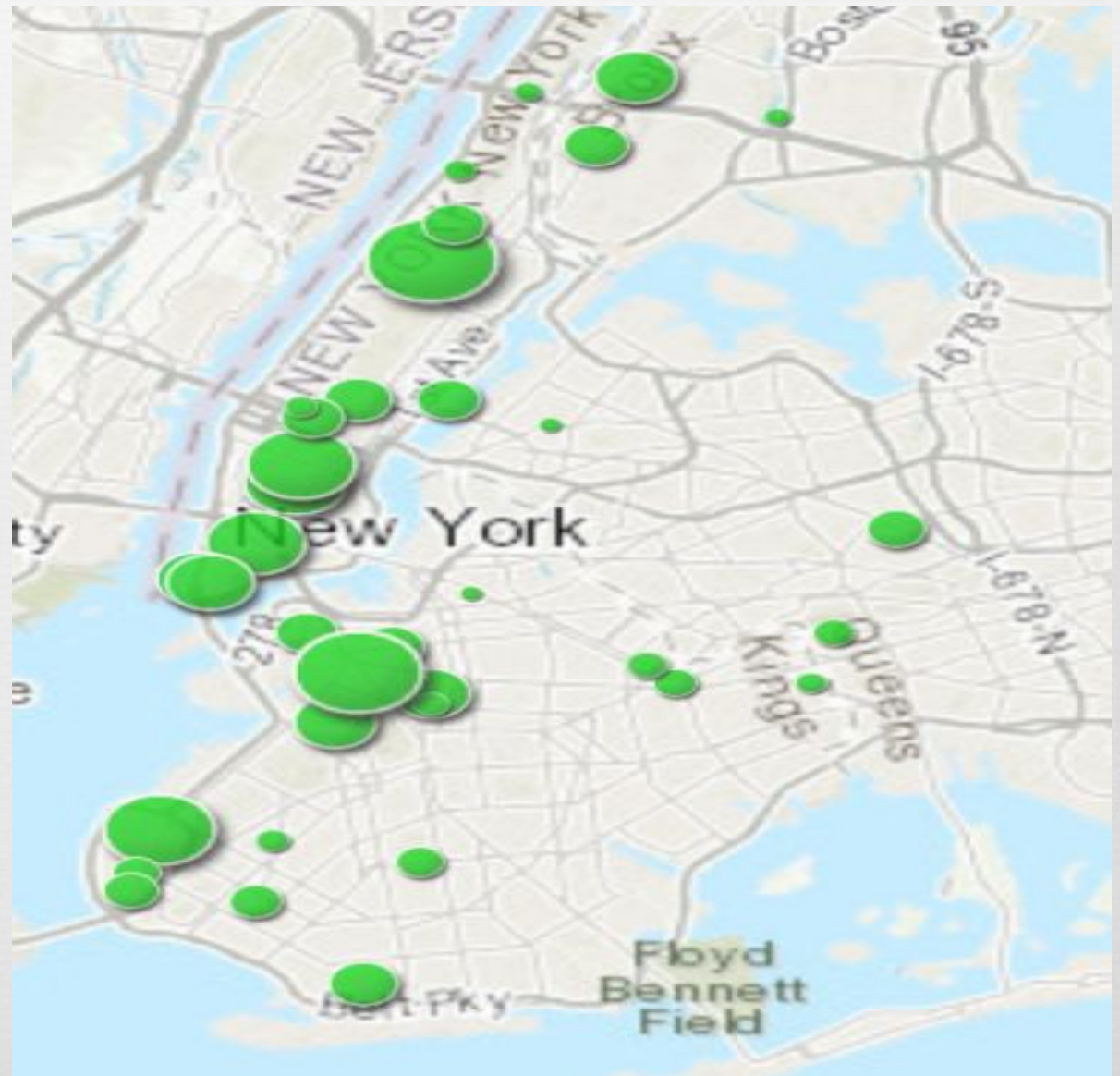
 > 1.49

 0.9

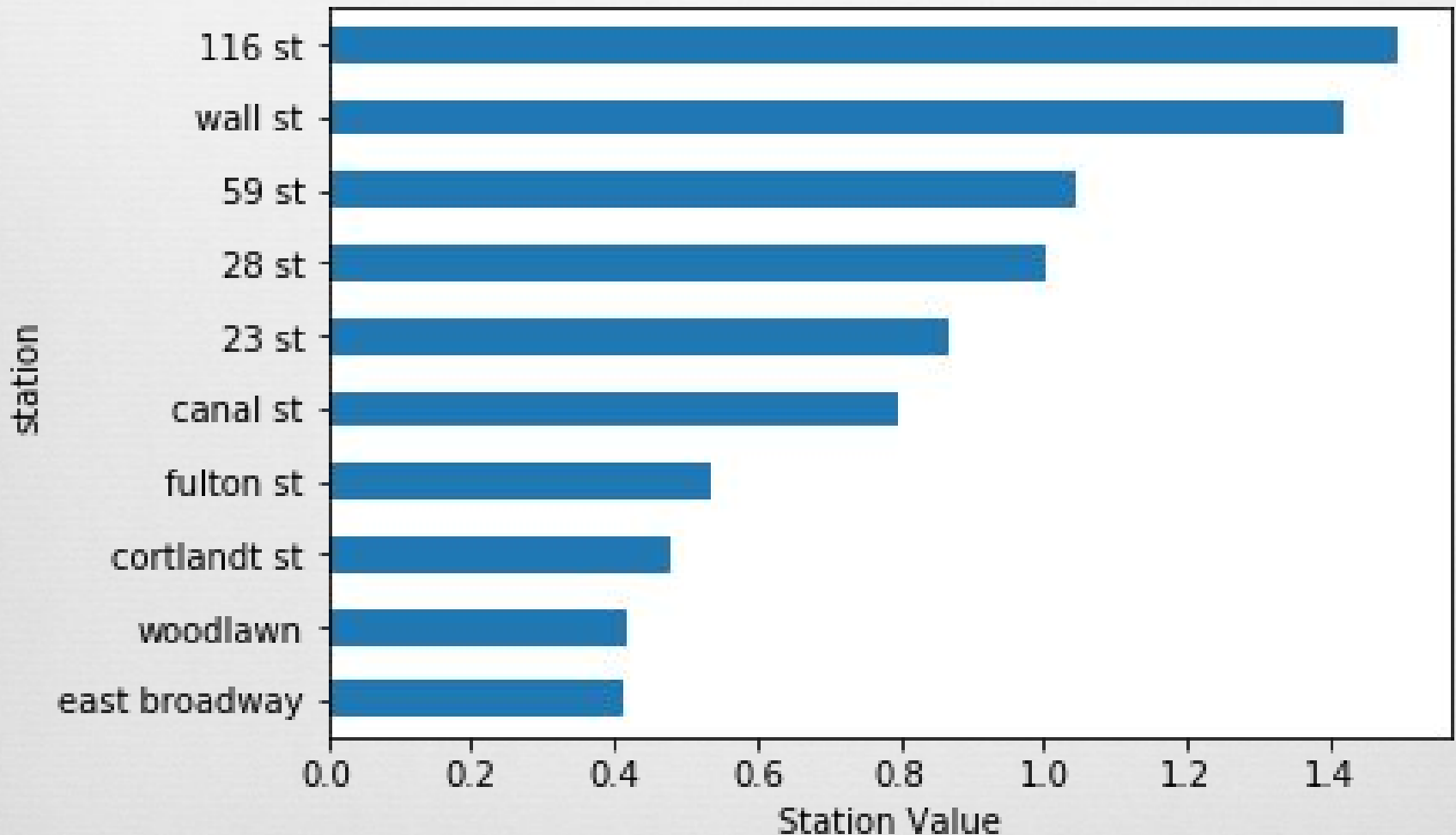
 0.3

 -0.31

 < -0.9



Most Valuable Stations



Further Analysis



- Find areas with heavy tech influence such as using North American Industry Classification System (NAICS) for Technology Sector
- Find data in people holding computer science, mathematics, and engineering degrees
- Find data where most donors live