

WhereSIOUS - San Diego

Where Should I Open Up Shop?

Jeffrey Silverman



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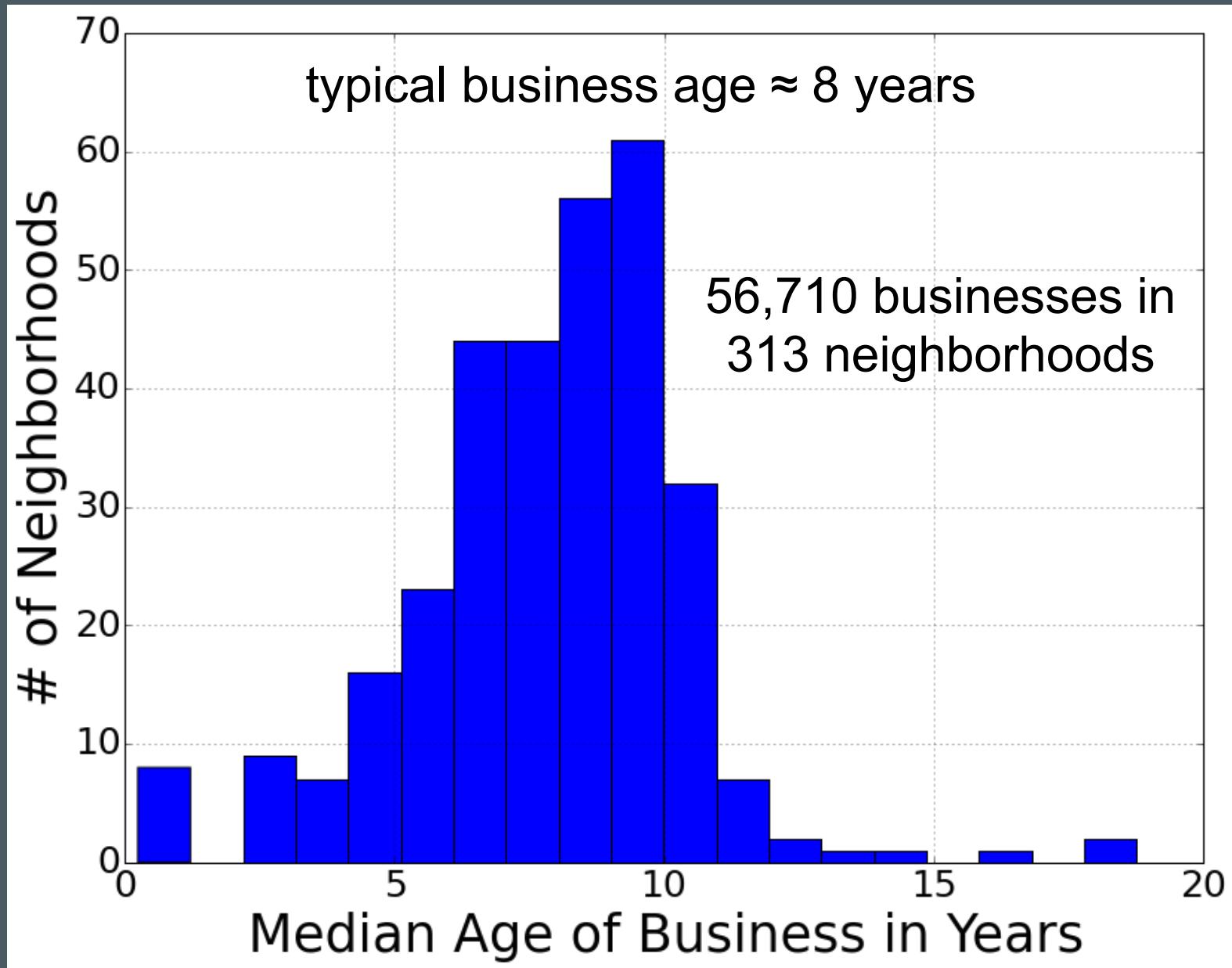
A photograph of the San Diego skyline, featuring numerous skyscrapers and modern buildings along the waterfront under a clear blue sky.

Should my new
restaurant go here?

Is this a good place for
my next car dealership?



Longevity == Business Success



From Data to WhereSIOUS Score



describe each neighborhood
& their businesses

From Data to WhereSIOUS Score

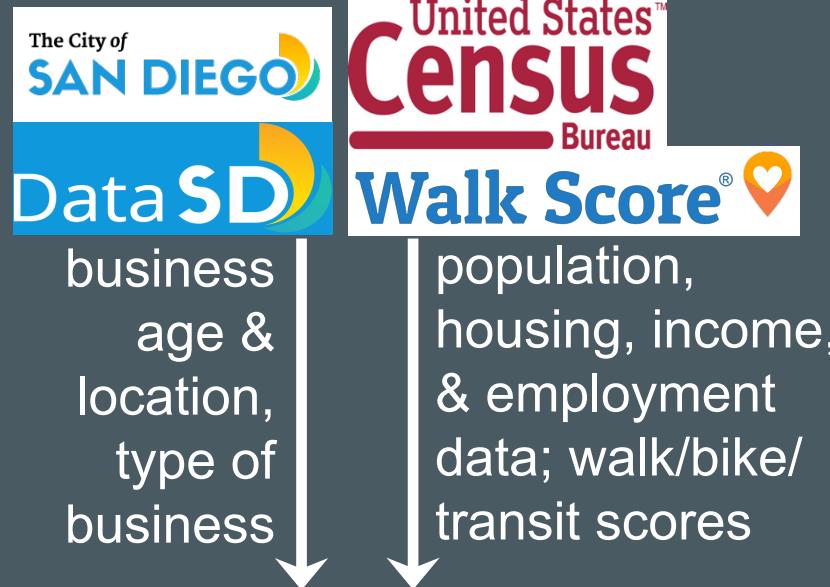


business
age &
location,
type of
business

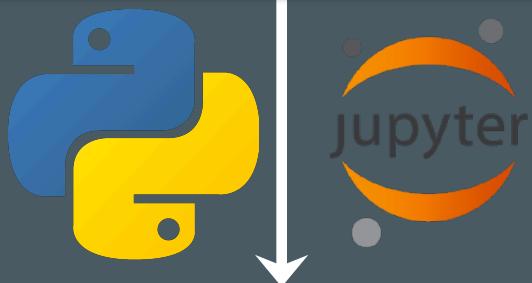
population,
housing, income,
& employment
data; walk/bike/
transit scores

describe each neighborhood
& their businesses

From Data to WhereSIOUS Score

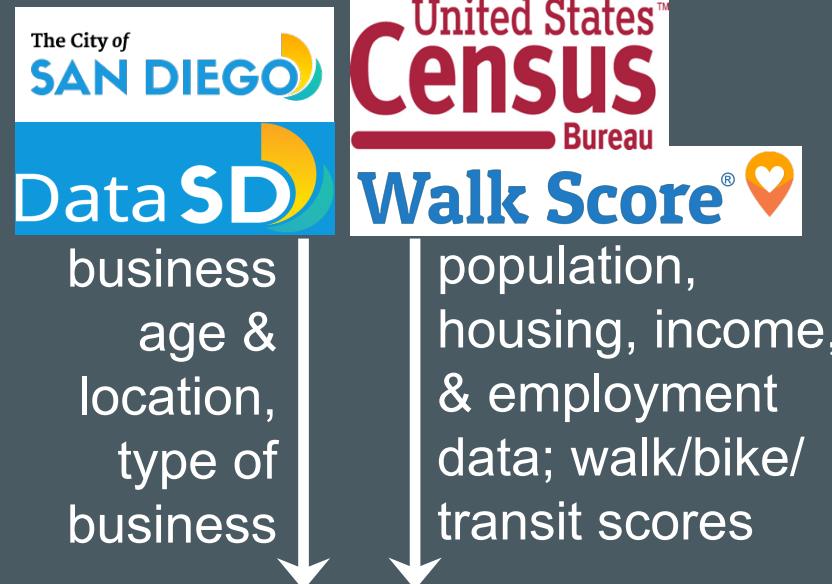


describe each neighborhood
& their businesses

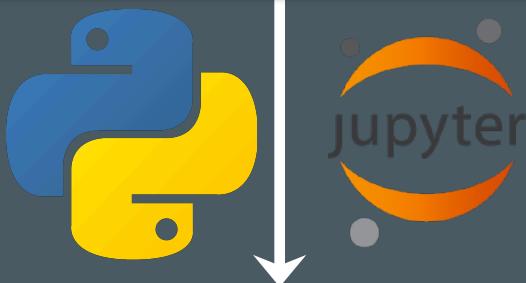


linear regression with input
data & business ages

From Data to WhereSIOUS Score



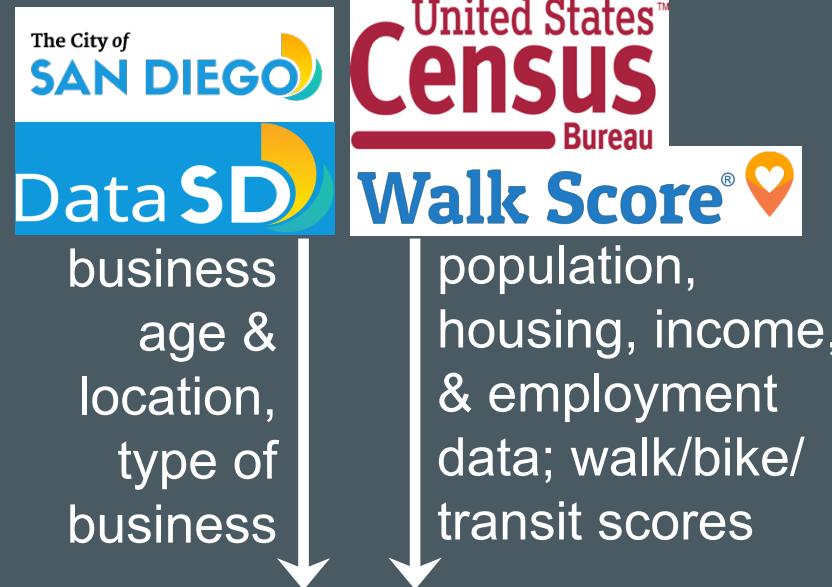
describe each neighborhood
& their businesses



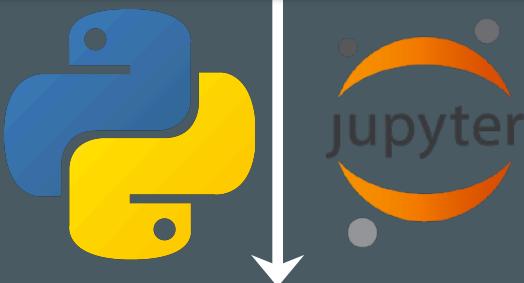
linear regression with input
data & business ages

calculate WhereSIOUS score
(scaled from predicted business
age) for each neighborhood

From Data to WhereSIOUS Score



describe each neighborhood
& their businesses

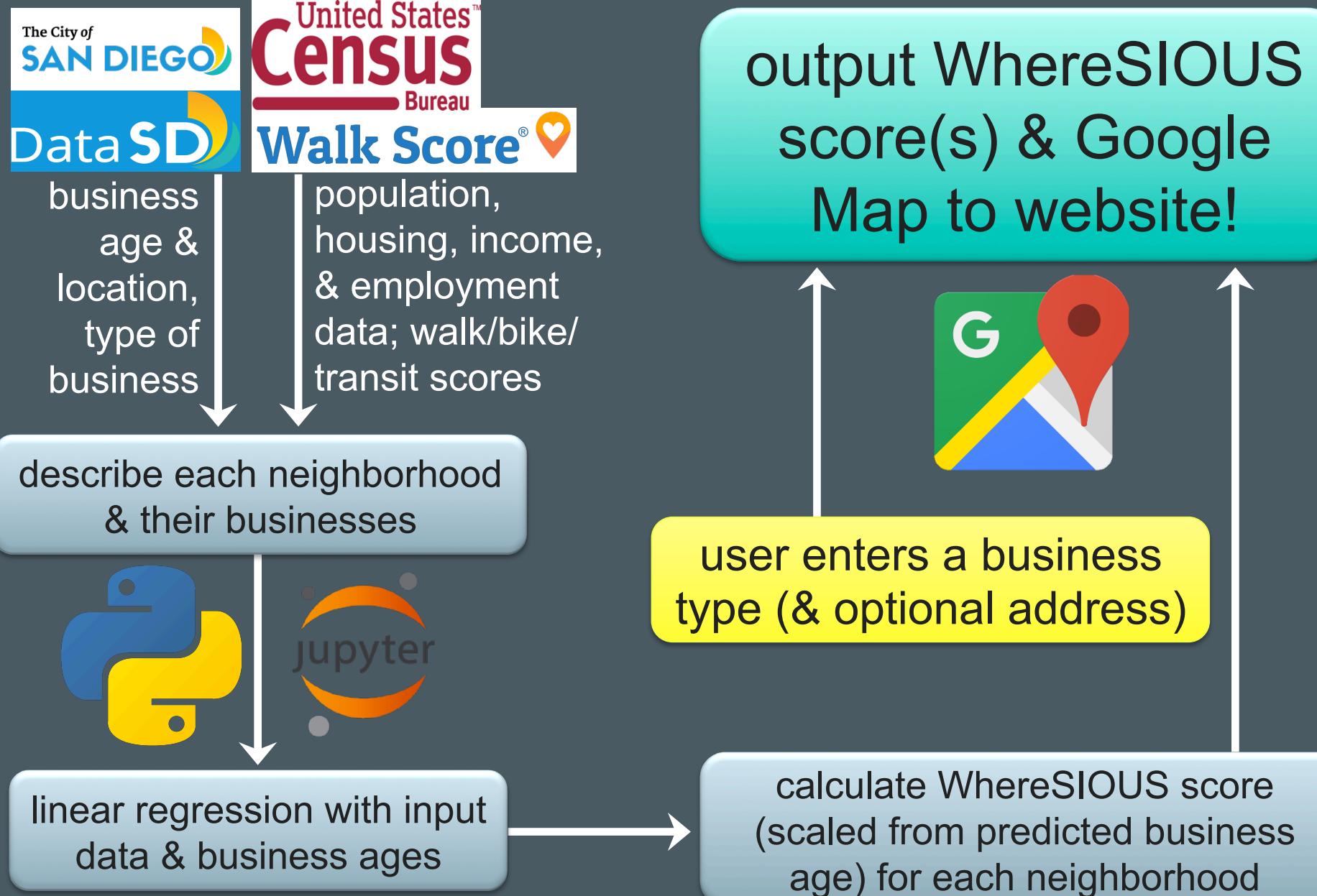


linear regression with input
data & business ages

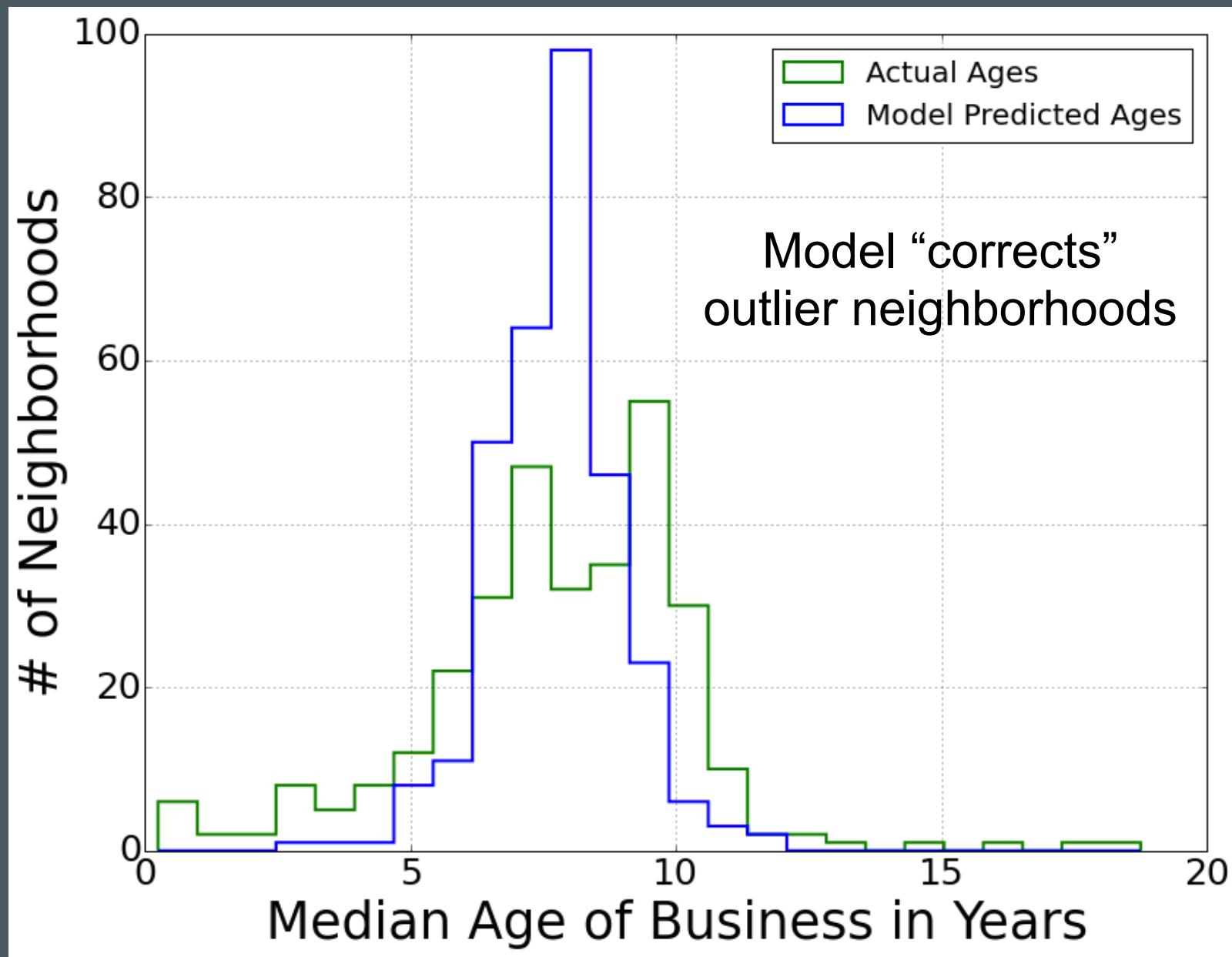
user enters a business
type (& optional address)

calculate WhereSIOUS score
(scaled from predicted business
age) for each neighborhood

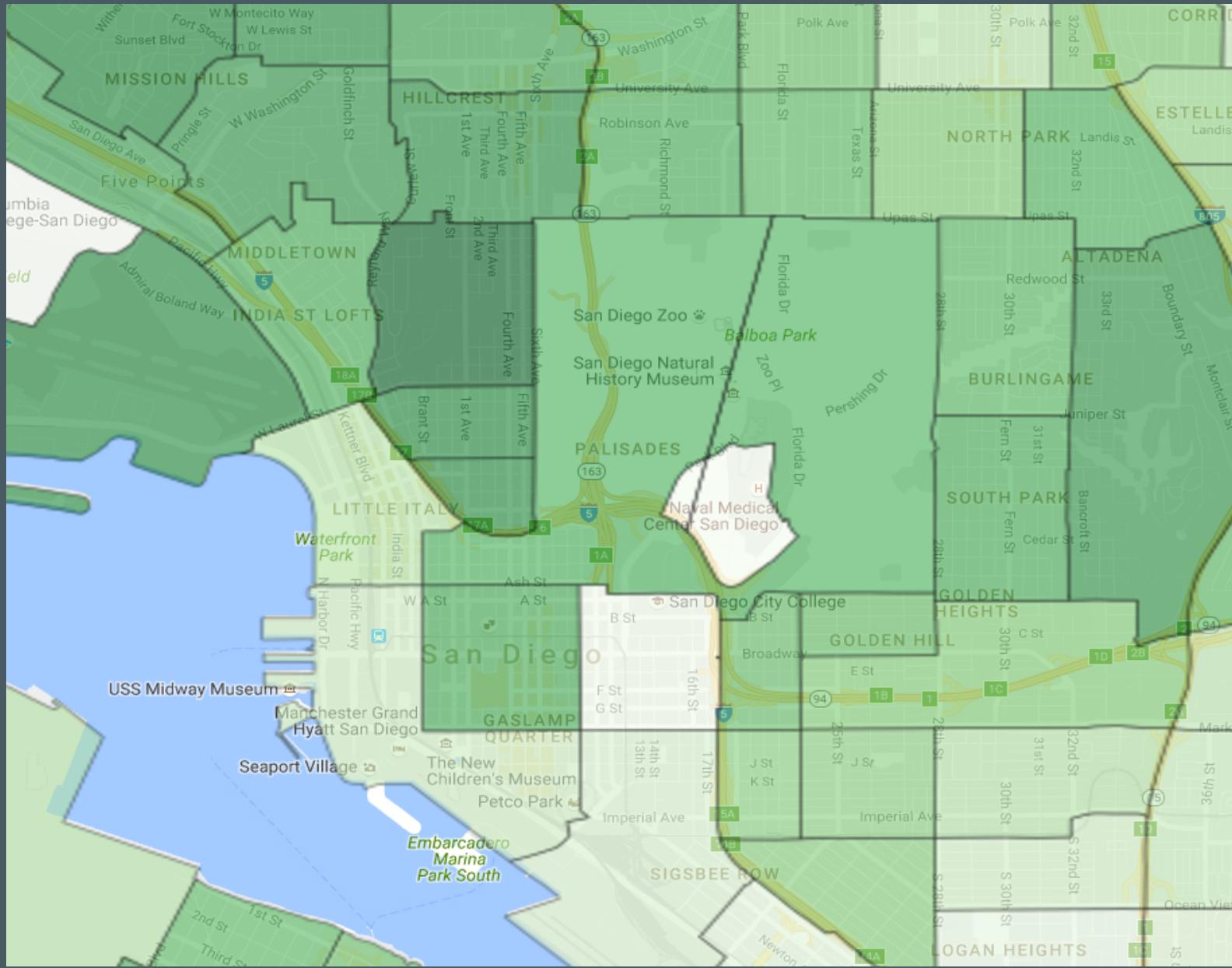
From Data to WhereSIOUS Score



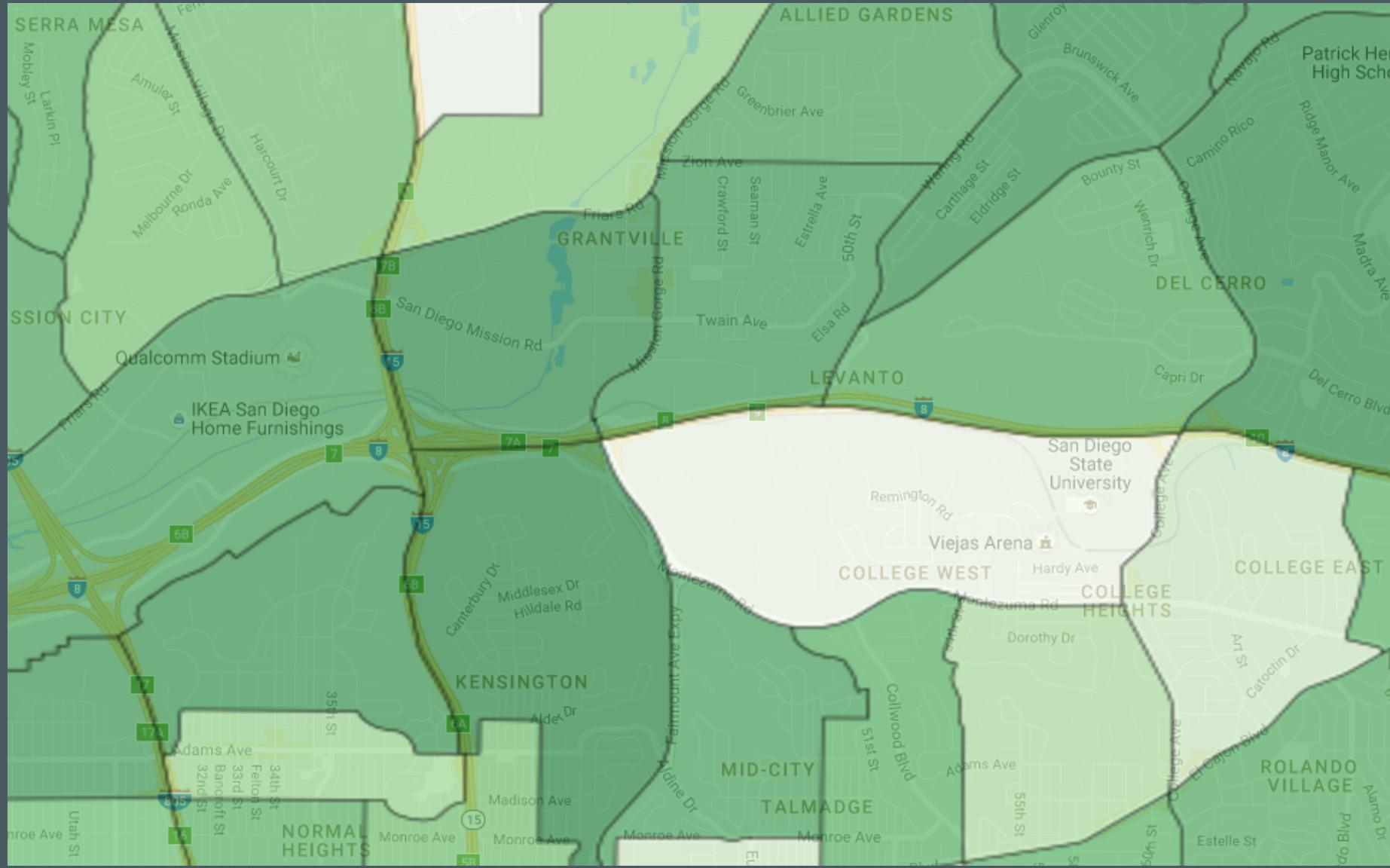
Validation (LOOCV = 0.105; $r^2 = 0.23$)



Downtown San Diego



SD State University & Qualcomm Stadium



Successful Businesses Tend to Have...

- Higher median age
- Higher employment percentage



Successful Businesses Tend to Have...

- Higher median age 
- Higher employment percentage 

...and possibly have...

- Higher percent female population 
- Higher percent adult population 

Successful Businesses Tend to Have...

- Higher median age



- Higher employment percentage



...and possibly have...

- Higher percent female population



- Higher percent adult population



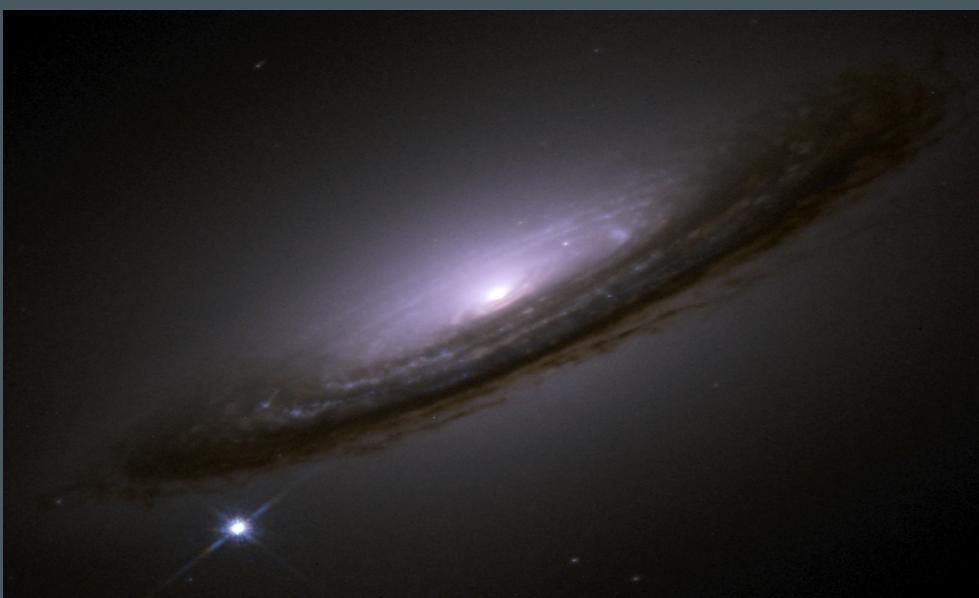
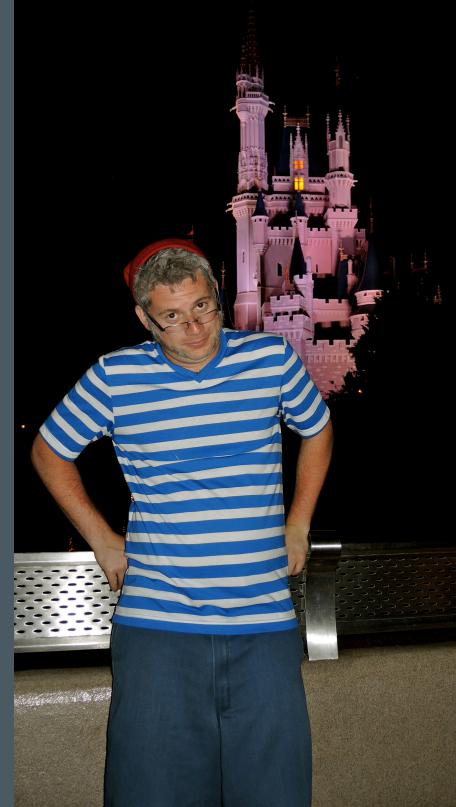
- Higher “walk score”



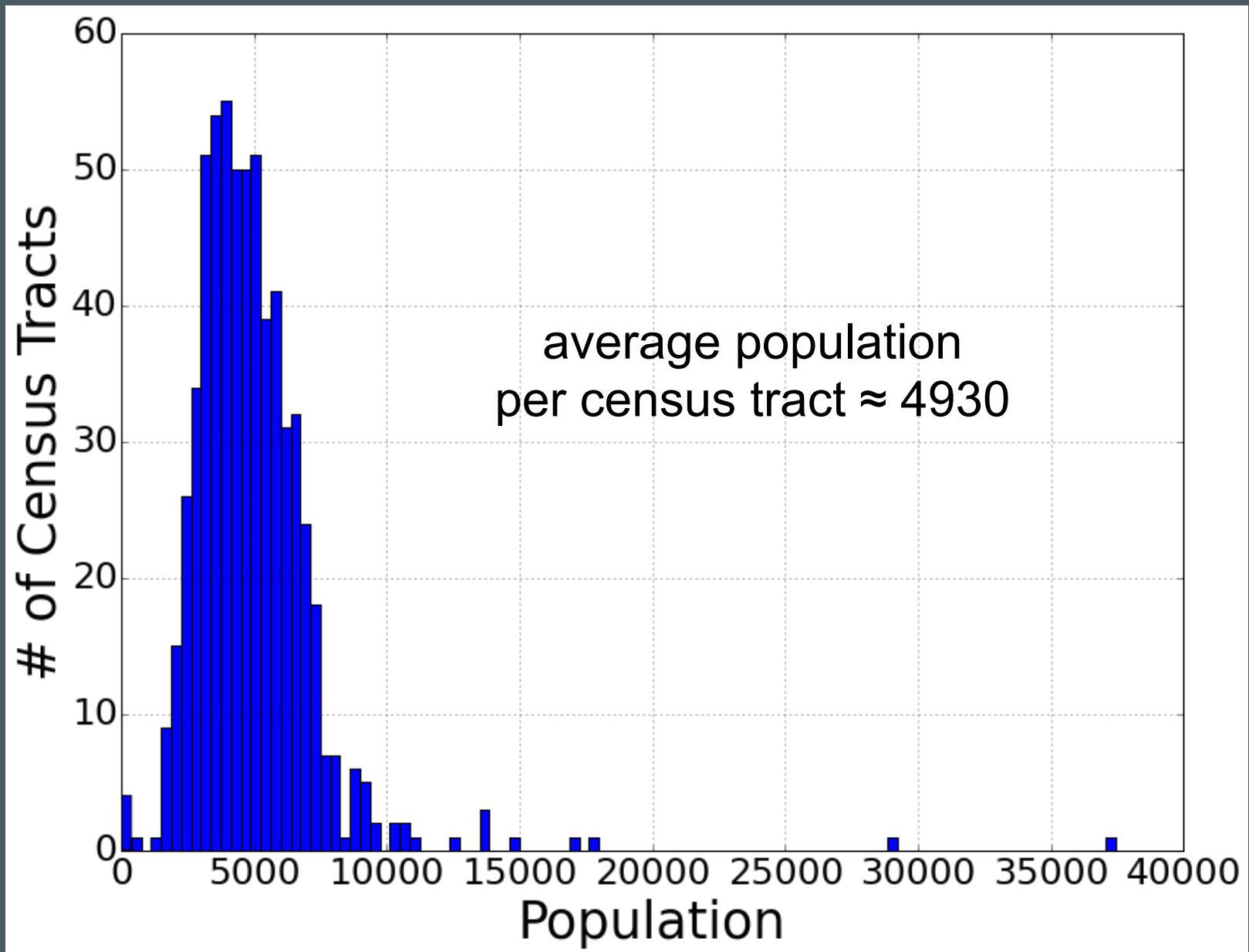
- Lower “bike score” (?)



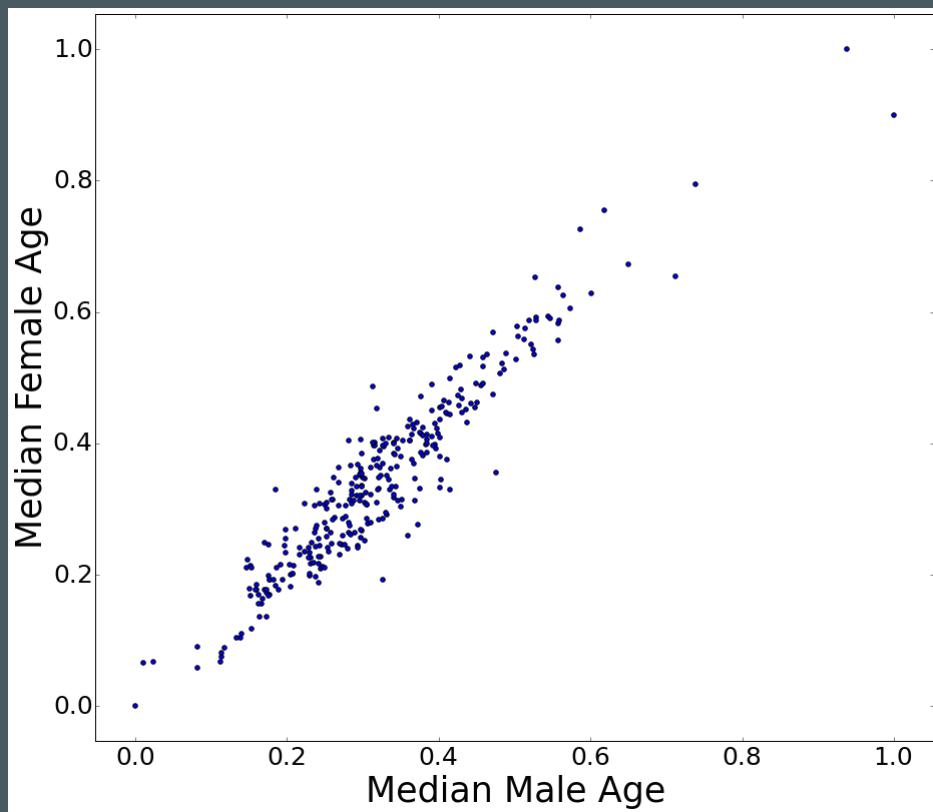
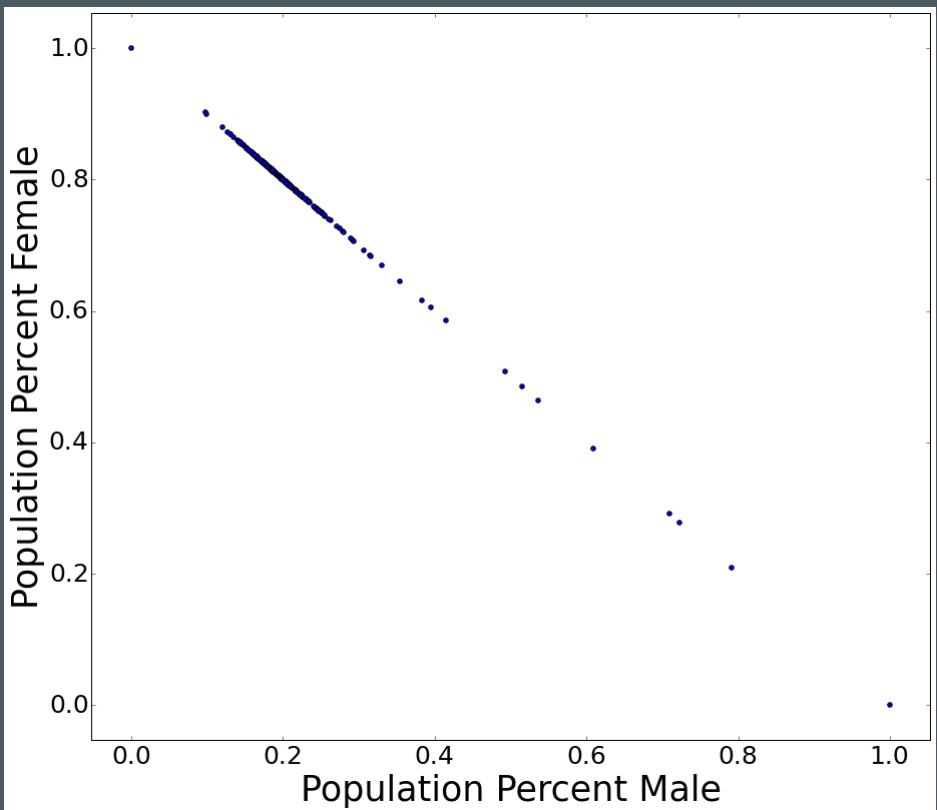
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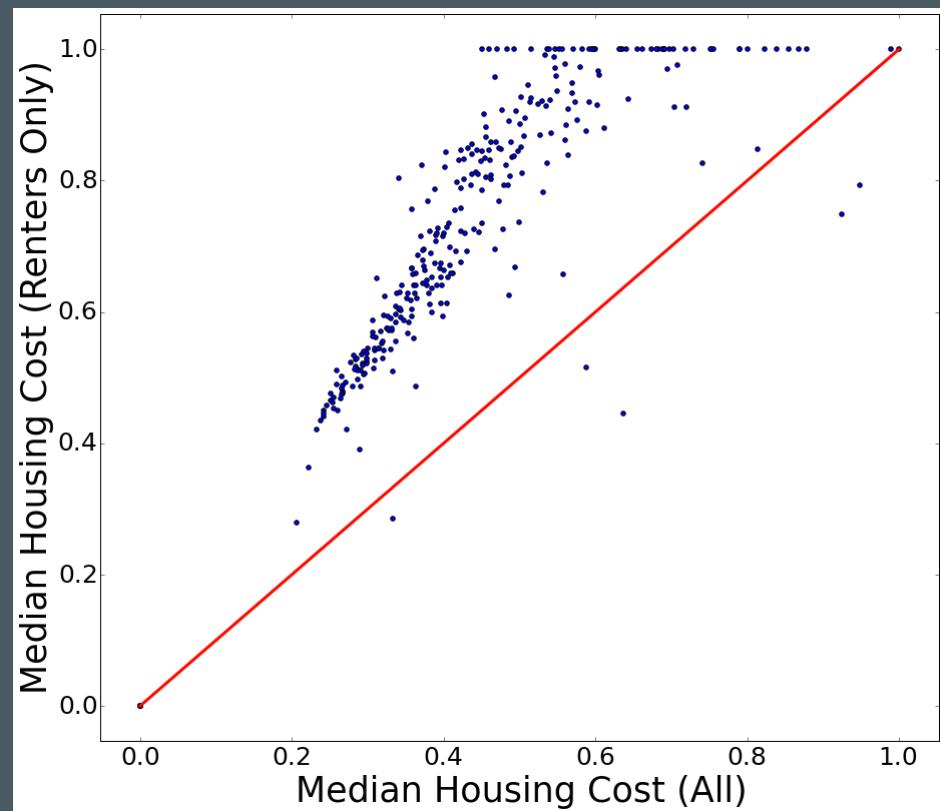
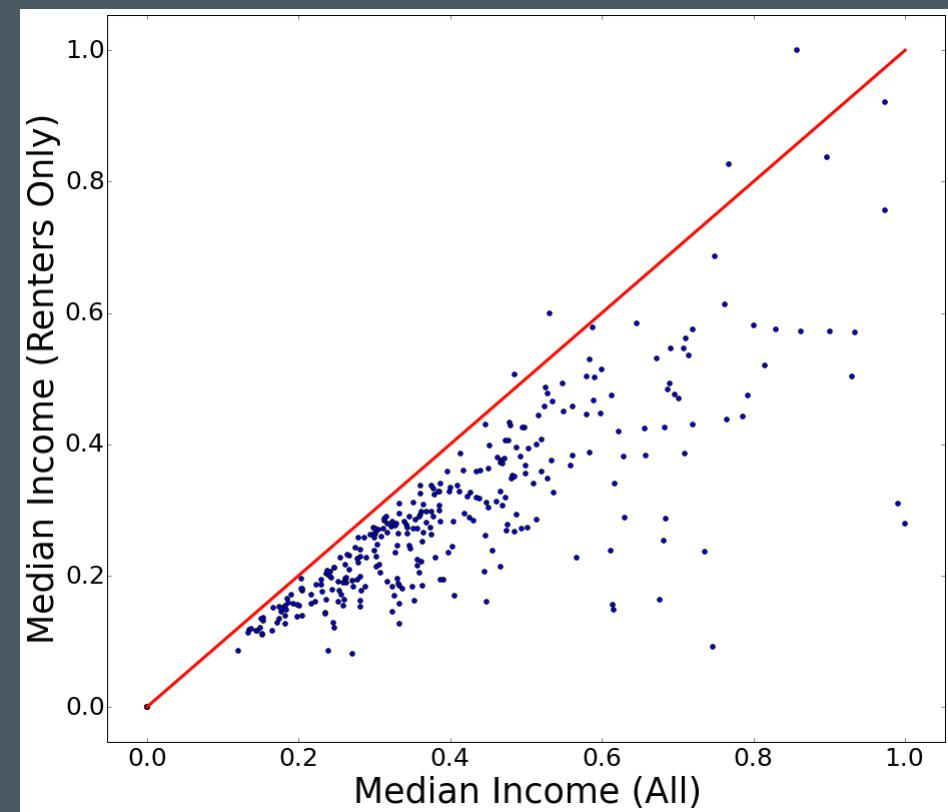
Neighborhoods (i.e., Census Tracts)



Fun With Census Data!



Fun With Census Data!



Features Used (41)

- Total # of businesses
- Total # of businesses of each type
- Total population
- Percent female population (1.5σ)
- Percent adult population (1.3σ)
- **Median age (3.5σ)**
- Total # of homes
- **Employment percentage (1.5σ)**
- Median income
- Median income for homeowners
- Median income for renters
- Median housing cost
- Median housing cost for homeowners
- Median housing cost for renters
- Walk score (1σ)
- Transit score
- Bike score (1.5σ)
- Total annual amount spent in parking meters