Predicting Gentrification in California

By Mason Ellard

Overview

- **Motivation:** Predicting where gentrification is most likely to occur can inform policy decisions that may help to prevent displacement

DATA AND METHODOLOGY

GENTRIFICATION TRENDS

MODEL PERFORMANCE

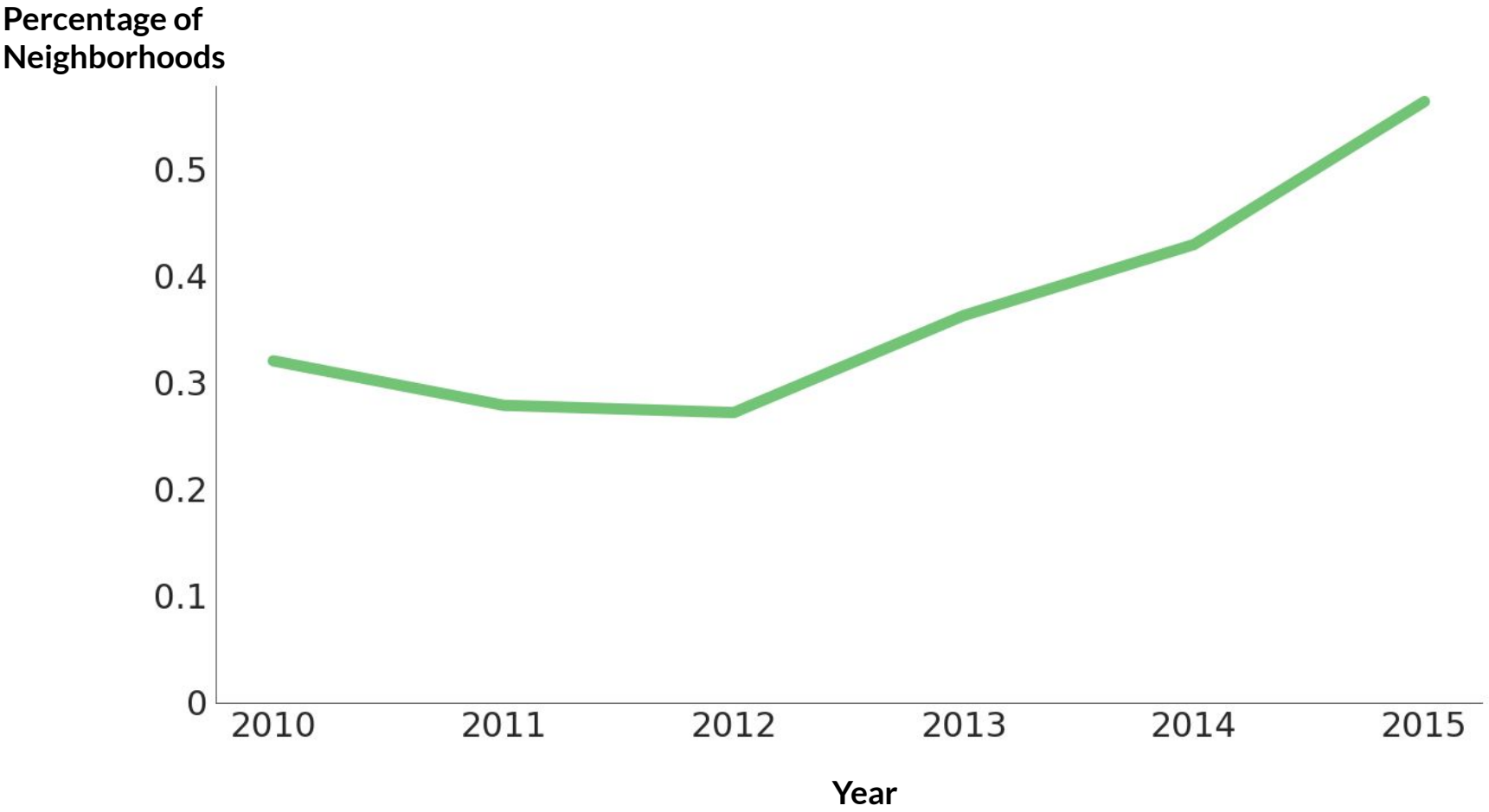
Data and Methodology

- **Source:** Using Census data from 2010 - 2018 for neighborhoods over a 3-year period
- **Neighborhood Eligibility:** Bottom 10 percentile for median household income (2010-2015)
- **Gentrification Definition:**
  - Must reach the top 20 percentile for median household income
  - Per capita income must increase by 20%

Eligible Neighborhoods: 4416

Gentrified: 1638

Gentrification Trends: (2010 - 2015)



Mapping The Neighborhoods

Model Performance

Developers

Random Forest

Precision: .49
Recall: .53
Accuracy: .64

Policy Makers

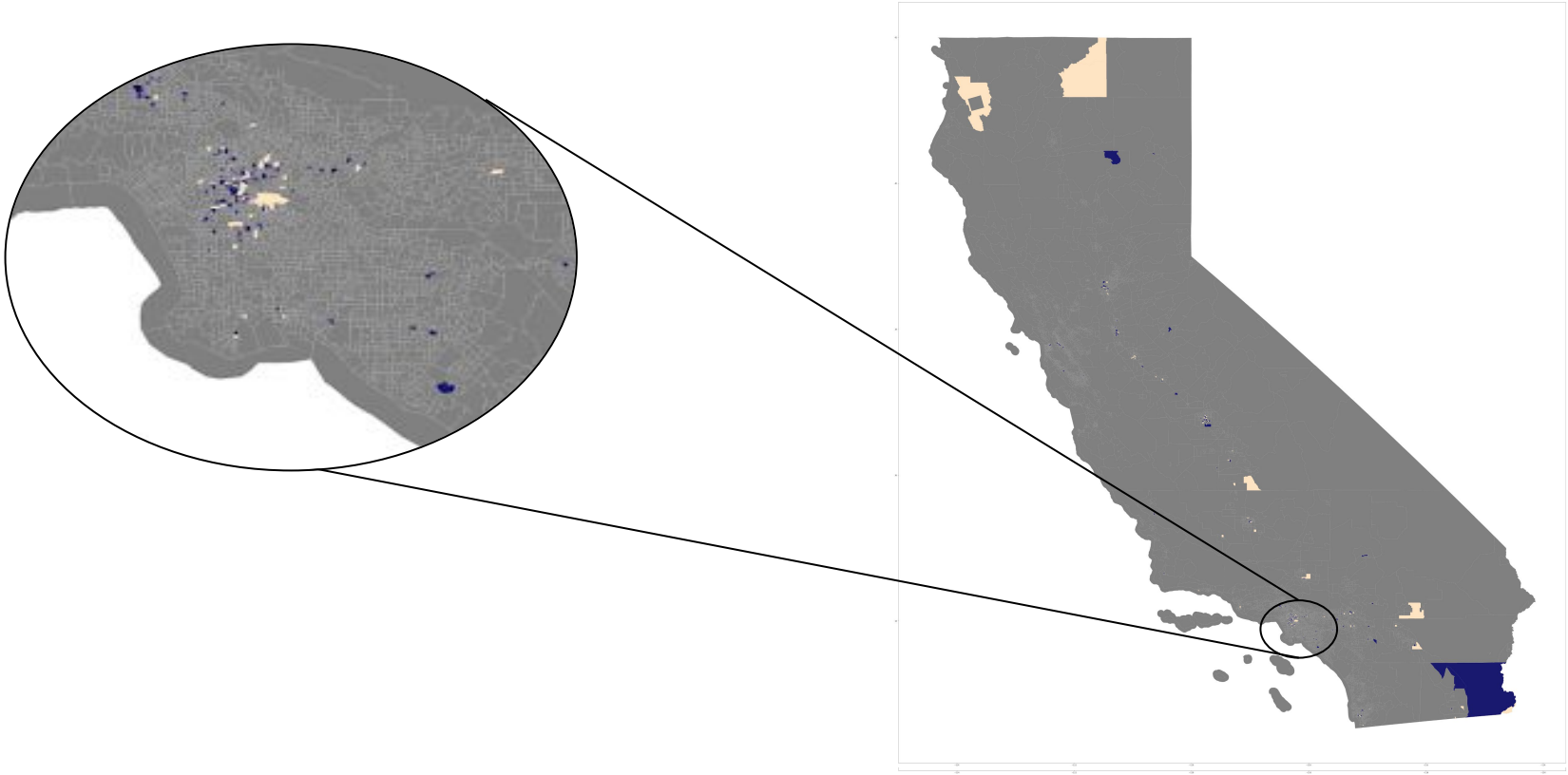
Artificial Neural Net

Precision: .67
Recall: .49
Accuracy: .61

Features

Population
Median Household Income
Per Capita Income
Land Area
Education
Transportation
Race Demographics
Median Age
Closest Neighborhoods

Neural Network Performance



Moving Forward...

Models are predictive, but not production ready.

Can be generalized to entire US.

Will be deployed in an online interactive dashboard.

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Github:

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