

# Foursquare venue's as an Election Predictor

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## 1. Introduction

### 1.1 Background

One of the most anticipated events of modern democracies is election. Citizens cast their valuable votes to elect whom they think will best serve their needs ranging from economic, social, health and many more. Conversations about the result of an election is the highlight of almost every household, news channel, social media and every facet of human communication. So it is imperative to have models using as many indicators to best predict the outcome of an election.

### 1.2 Problem

There are many data indicators available, which are used to predict and analyse the outcome of an election. The United States is primarily divided into a two party election. This project aims to study the trends and similarities between counties based on the most visited venues and assess how strong would these data points be at predicting the outcome of the 2016 presidential elections. This would provide information on the correlation between political identities of a county with its popular venues.

## 2. Data

### 2.1 Data Sources

Data relating to US Presidential election is found in abundance on the Internet and Kaggle. However, the data offered by [opendatasoft.com](https://www.opendatasoft.com) had the most relevant features for my model and can be found [here](#). Since the model would use the venues in each county, I chose to use the latitude and longitude of the centroids of the respective counties, which is also provided in the above linked dataset. Foursquare was used to obtain the relevant popular venues.

### 2.2 Feature selection

I will compare the data-points provided with the original dataset with the features mentioned below and train to Machine Learning algorithms; K nearest neighbour (KNN) and Logarithmic regression and obtain a confusion matrix along with accuracy predictors.

Features: 'Less Than High School Diploma', 'At Least High School Diploma', 'At Least Bachelors' Degree', 'Graduate Degree', 'School Enrolment', 'Median Earnings 2010', 'White (Not Latino) Population', 'African American Population', 'Native American Population', 'Asian

American Population', 'Other Race or Races', 'Latino Population', 'Median Age', 'Uninsured Percentage', 'Unemployment Percentage'

Feature selection for the foursquare data comparison will be based on the list of venues generated and then processed to fit the requirements of the Machine Learning algorithms.

The accuracy indicators between the cases will be studied and compared to understand the political predictability based on popular venues obtained from Foursquare.