Visual correlation between religious distribution and cultural venues

My Coursera Capstone Project

Introduction

▶ In this project I want to compare two things:

  ▶ Religious distributions in all countries of the world

  ▶ Distribution of successful cultural venues in the capitals of each country

▶ If there is a correlation, religion could be an important success factor

▶ This could help future business owners

Data

- The data for religious distributions have been grabbed from

  - https://en.wikipedia.org/wiki/Religions_by_country

- The geolocations for the capitals of each country have been taken from

  - http://techslides.com/list-of-countries-and-capitals

- The data for successful venues come from the foursquare API:

  - http://foursquare.com

Methodology

- Create maps that show religious distributions
  - Maps should give clear impression of the density over the world
  - Circle markers located on each capital
  - Size of the markers adjusted to square root of the number of people
  - Area of a marker is proportional to the number of people
- Make a function call to the foursquare API for each capital
  - Get 100 most important venues in the range of 5km around the city centre
  - Calulate mean distributions for all venue categories
  - Cluster these in 7 different clusters with the kmeans algorithm.
  - Plot clusters in a folium map with circle markers
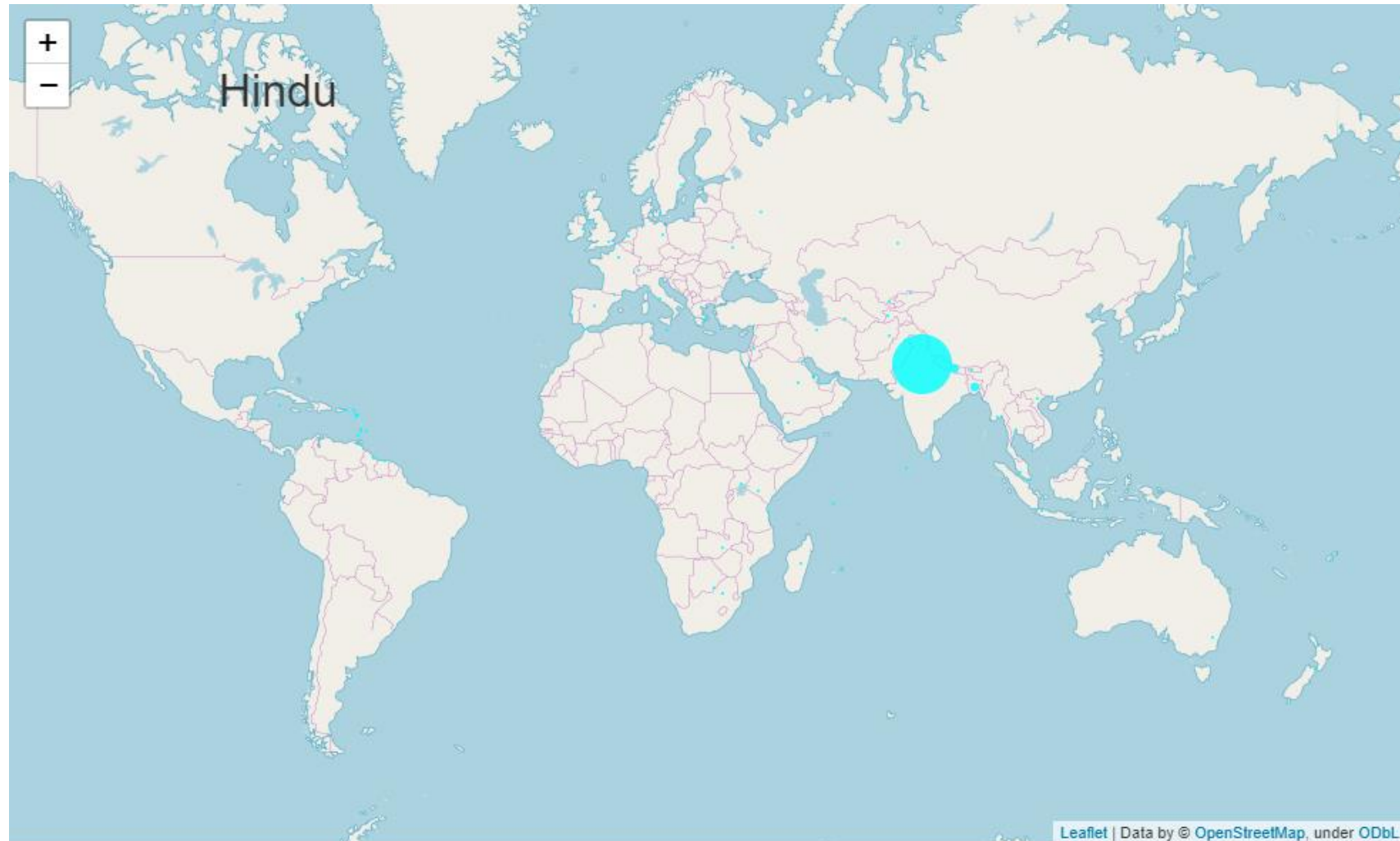
Results
Religious distributions

Results
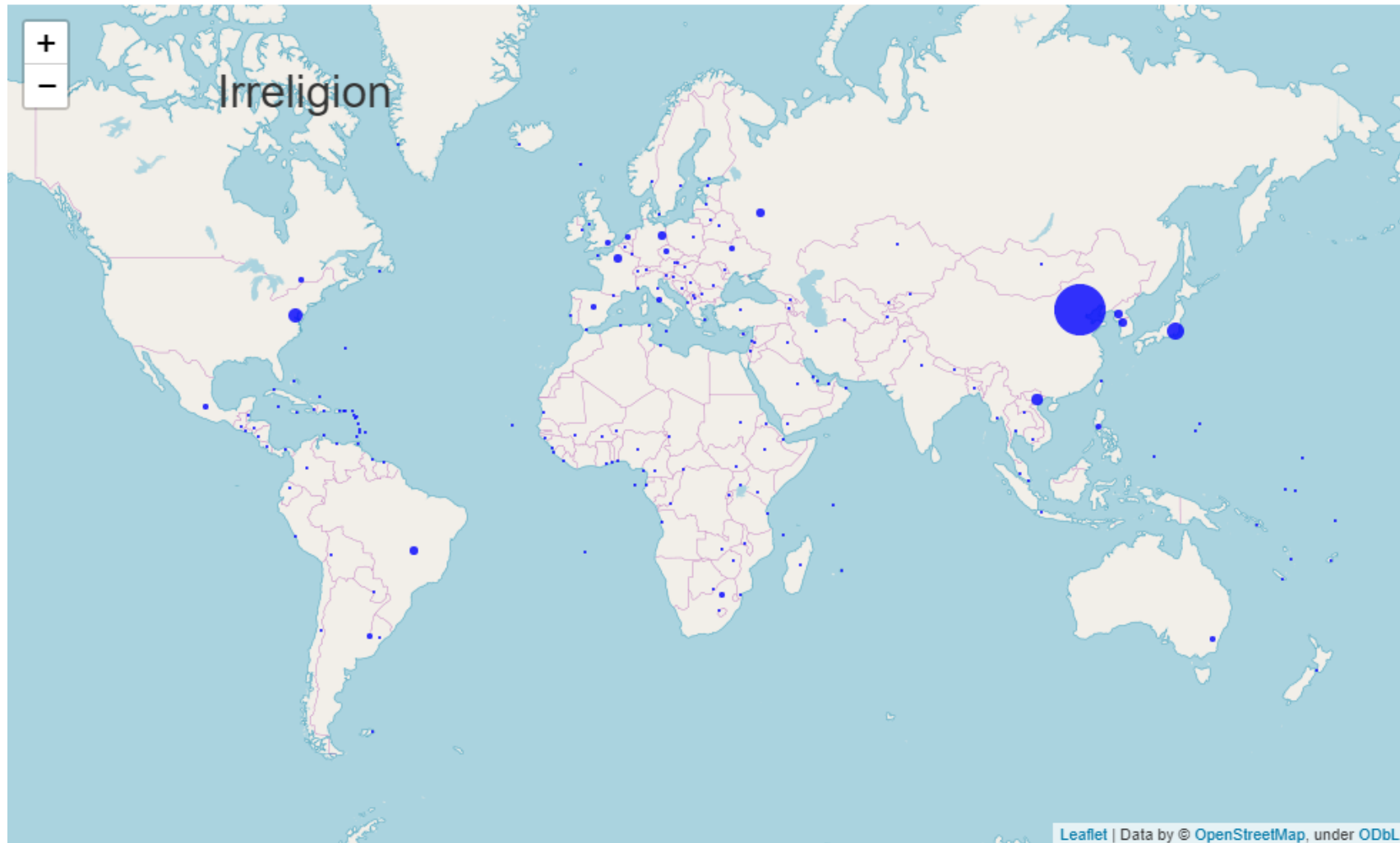## Religious distributions

Results
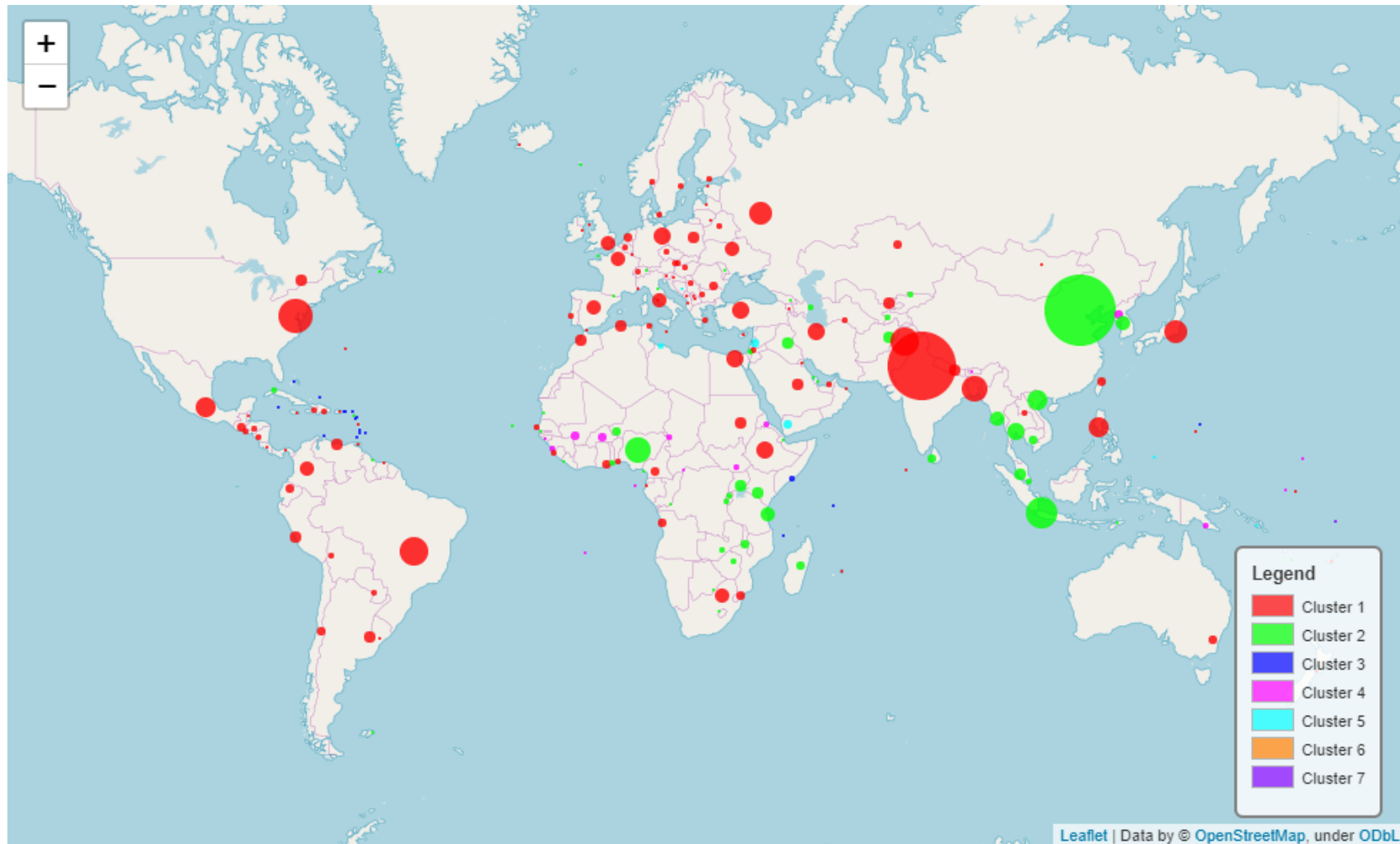## Religious distributions

Results
Religious distributions

Results
Religious distributions

Results
Clusters of cultural venues

Legend
- Cluster 1 (red)
- Cluster 2 (green)
- Cluster 3 (blue)
- Cluster 4 (magenta)
- Cluster 5 (cyan)
- Cluster 6 (orange)
- Cluster 7 (purple)

Leaflet | Data by © OpenStreetMap, under ODbL.

Discussion

- Strong overlap between religious distributions and cultural venue clusters
- Religion seems to be a strong influence factor to cultural properties
- New business owners are strongly adviced to look at religious aspects

- Next step:
  - Build a model to predict the chance of success for different kind of venues
  - Depending on religious aspects, geographical properties and historical data of successful venues