

Finding alternative cities to live in the Northwest US

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IBM Applied Data Science Capstone Project

Business Problem

Seattle is the fastest growing city in the US, causing sense of crowding and displacement for existing residents, compelling some to seek alternative places to live in the Northwest US.

Washington State alone has 211 cities and there are over 650 cities in the Northwest. With so many cities to choose from,



How can prospective Northwest home buyers find similar cities to live in?

Data



Wikipedia. *List of cities in Washington, Oregon, Idaho state*



MapquestAPI. *City location data*



FoursquareAPI. *Top venues and their categories for each city*

k-means clustering algorithm
to identify patterns in the
data

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graph TD; A[k-means clustering algorithm to identify patterns in the data] --> B[top 5 venue categories for each city's vector profile for clustering]; B --> C[clusters most meaningful and interesting with k=6];
```

top 5 venue categories for
each city's vector profile for
clustering

clusters most meaningful and
interesting with $k=6$

Methodology

Results/Discussion

Clusters

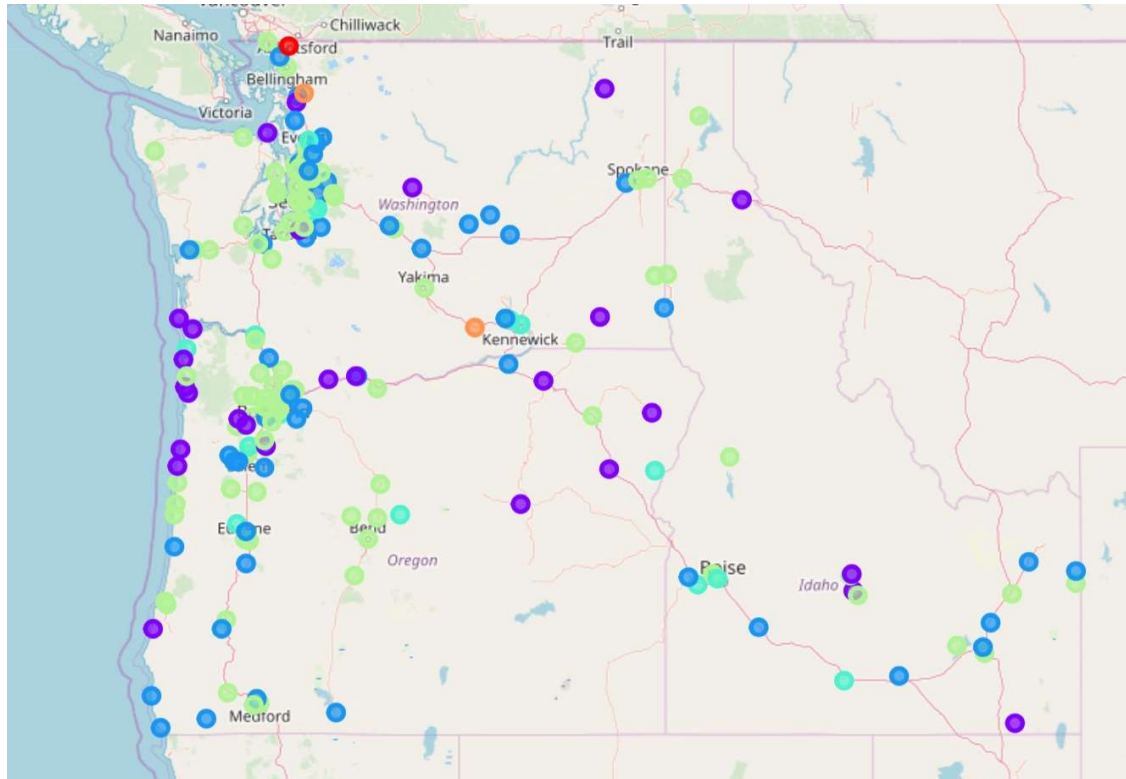
2 outliers. *Due to unique venue types and combinations.*

Coffee cities. *Coffee + diverse venue offerings typical of large urban centers.*

Restaurant cities. *Pizza places reign supreme.*

Fast food cities. *Bedroom communities situated between larger cities.*

Vacation destinations. *Accommodations, restaurants and night life.*



653 total cities in Washington, Oregon, and Idaho states



593 cities with Foursquare API data representing 5935 venues



180 cities with > 10 venues in Foursquare representing 4272 venues and 309 unique categories

Conclusion