Clustering of the world most visited cities

How to recommend the next best travel destination to clients

Problem

- How to recommand destinations to clients
- Finding similarities between destinations

What data we use

- Top 100 most visited cities in the world
- Foursquare location data for venues in each of the top 10 categories
- GPS coordinates
- City population and arrivals

Foursquare main venue categories

Arts & Entertainment

College & University

Event

Food

Nightlife Spot

Outdoors & Recreation
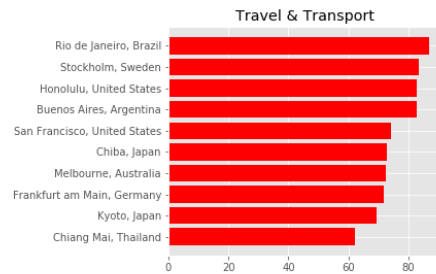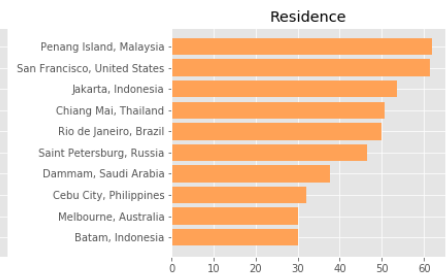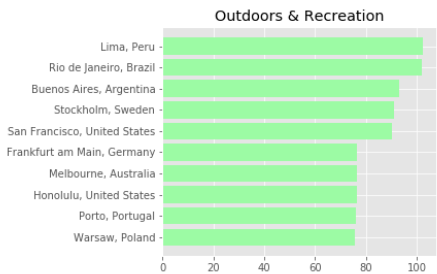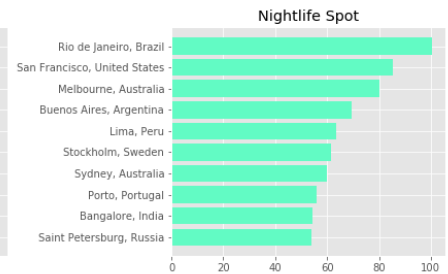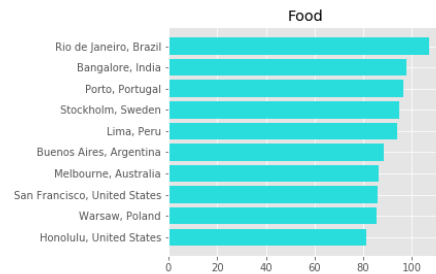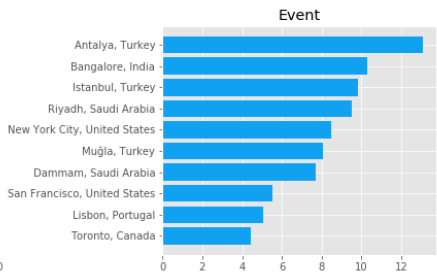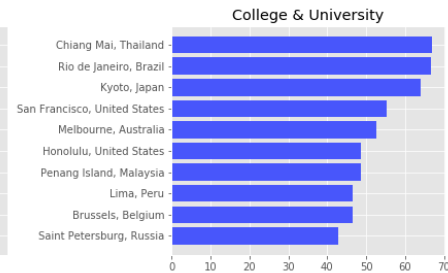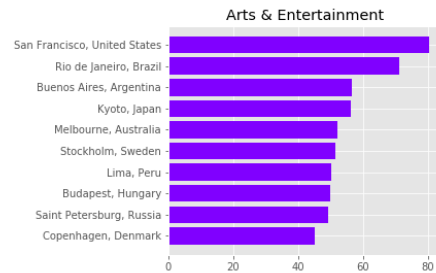
Professional & Other Places

Residence

Shop & Service

Travel & Transport

Top 100 most visited cities (by arrivals)

Top 10 cities (by venue category)

Arts & Entertainment
- San Francisco, United States
- Rio de Janeiro, Brazil
- Buenos Aires, Argentina
- Kyoto, Japan
- Melbourne, Australia
- Stockholm, Sweden
- Lima, Peru
- Budapest, Hungary
- Saint Petersburg, Russia
- Copenhagen, Denmark

College & University
- Chiang Mai, Thailand
- Rio de Janeiro, Brazil
- Kyoto, Japan
- San Francisco, United States
- Melbourne, Australia
- Honolulu, United States
- Penang Island, Malaysia
- Lima, Peru
- Brussels, Belgium
- Saint Petersburg, Russia

Event
- Antalya, Turkey
- Bangalore, India
- Istanbul, Turkey
- Riyadh, Saudi Arabia
- New York City, United States
- Muğla, Turkey
- Dammam, Saudi Arabia
- San Francisco, United States
- Lisbon, Portugal
- Toronto, Canada

Food
- Rio de Janeiro, Brazil
- Bangalore, India
- Porto, Portugal
- Stockholm, Sweden
- Lima, Peru
- Buenos Aires, Argentina
- Melbourne, Australia
- San Francisco, United States
- Warsaw, Poland
- Honolulu, United States

Nightlife Spot
- Rio de Janeiro, Brazil
- San Francisco, United States
- Melbourne, Australia
- Buenos Aires, Argentina
- Lima, Peru
- Stockholm, Sweden
- Sydney, Australia
- Porto, Portugal
- Bangalore, India
- Saint Petersburg, Russia

Outdoors & Recreation
- Lima, Peru
- Rio de Janeiro, Brazil
- Buenos Aires, Argentina
- Stockholm, Sweden
- San Francisco, United States
- Frankfurt am Main, Germany
- Melbourne, Australia
- Honolulu, United States
- Porto, Portugal
- Warsaw, Poland

Professional & Other Places
- San Francisco, United States
- Rio de Janeiro, Brazil
- Lima, Peru
- Honolulu, United States
- Buenos Aires, Argentina
- Abu Dhabi, United Arab Emirates
- Cebu City, Philippines
- Stockholm, Sweden
- Penang Island, Malaysia
- Porto, Portugal

Residence
- Penang Island, Malaysia
- San Francisco, United States
- Jakarta, Indonesia
- Chiang Mai, Thailand
- Rio de Janeiro, Brazil
- Saint Petersburg, Russia
- Dammam, Saudi Arabia
- Cebu City, Philippines
- Melbourne, Australia
- Batam, Indonesia

Shop & Service
- Rio de Janeiro, Brazil
- Stockholm, Sweden
- San Francisco, United States
- Frankfurt am Main, Germany
- Chiba, Japan
- Honolulu, United States
- Porto, Portugal
- Lima, Peru
- Melbourne, Australia
- Copenhagen, Denmark

Travel & Transport
- Rio de Janeiro, Brazil
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- Melbourne, Australia
- Frankfurt am Main, Germany
- Kyoto, Japan
- Chiang Mai, Thailand

Distribution of venue numbers (by category)

City cluster classification

Results

- There is no correlation between number of arrivals and local venues
- Total venue numbers have a high influence on cluster classification

Conclusion

- 5 clusters created to give a 'sense' of each city
- More features required to build a recommendation system