

# Coursera Capstone Course – Final Project

Author: Janitza Punto Gutierrez

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# Introduction

## Background

- Most of the tourists who visit Peru first land in Lima -> But right after take an airplane to Cusco
- Ample advertisement highlighting Machu Picchu as the most important touristic spot -> Reduces the chances of tourists visiting other interesting spots in Lima or in Cusco region
- Tourist agencies don't consider visitors' profile or interests (Ex. interest in historic spots or busy cities?)
- Visitors just trust in tourist agencies about the trip planning -> Possible to miss interesting spots not considered by agencies

## Purpose:

- Explore around already popular touristic spots in Lima and Cusco that are usually included in touristic packages
- Segment districts in Cusco and Lima to create a profile for each cluster according to touristic sites located there

## Interested audience:

- Tourist agencies -> would increase profit by giving personalized packages to tourists and including more spots during the trip
- Local government -> might increase income coming from touristic activities

# Data Usage and Sources

- List of all districts in Peru grouped by province and region (scrapped to get districts in Cusco and Lima only)

[https://es.wikipedia.org/wiki/Anexo:Distritos\\_del\\_Per%C3%BA](https://es.wikipedia.org/wiki/Anexo:Distritos_del_Per%C3%BA)

- PositionStack API (used to get district coordinates)

<https://positionstack.com/>

- Ministry of Foreign Trade and Tourism report about tourism development in Cusco -2018 (used to know most popular spots in Cusco)

[https://www.mincetur.gob.pe/wp-content/uploads/documentos/turismo/estadisticas/ReporteTurismoRegional/RTR\\_Cusco.pdf](https://www.mincetur.gob.pe/wp-content/uploads/documentos/turismo/estadisticas/ReporteTurismoRegional/RTR_Cusco.pdf)

- Ministry of Foreign Trade and Tourism report about tourism development in Lima – 2018 (used to know popular spots in Lima)

[https://www.mincetur.gob.pe/wp-content/uploads/documentos/turismo/estadisticas/ReporteTurismoRegional/RTR\\_Lima\\_2018.pdf](https://www.mincetur.gob.pe/wp-content/uploads/documentos/turismo/estadisticas/ReporteTurismoRegional/RTR_Lima_2018.pdf)

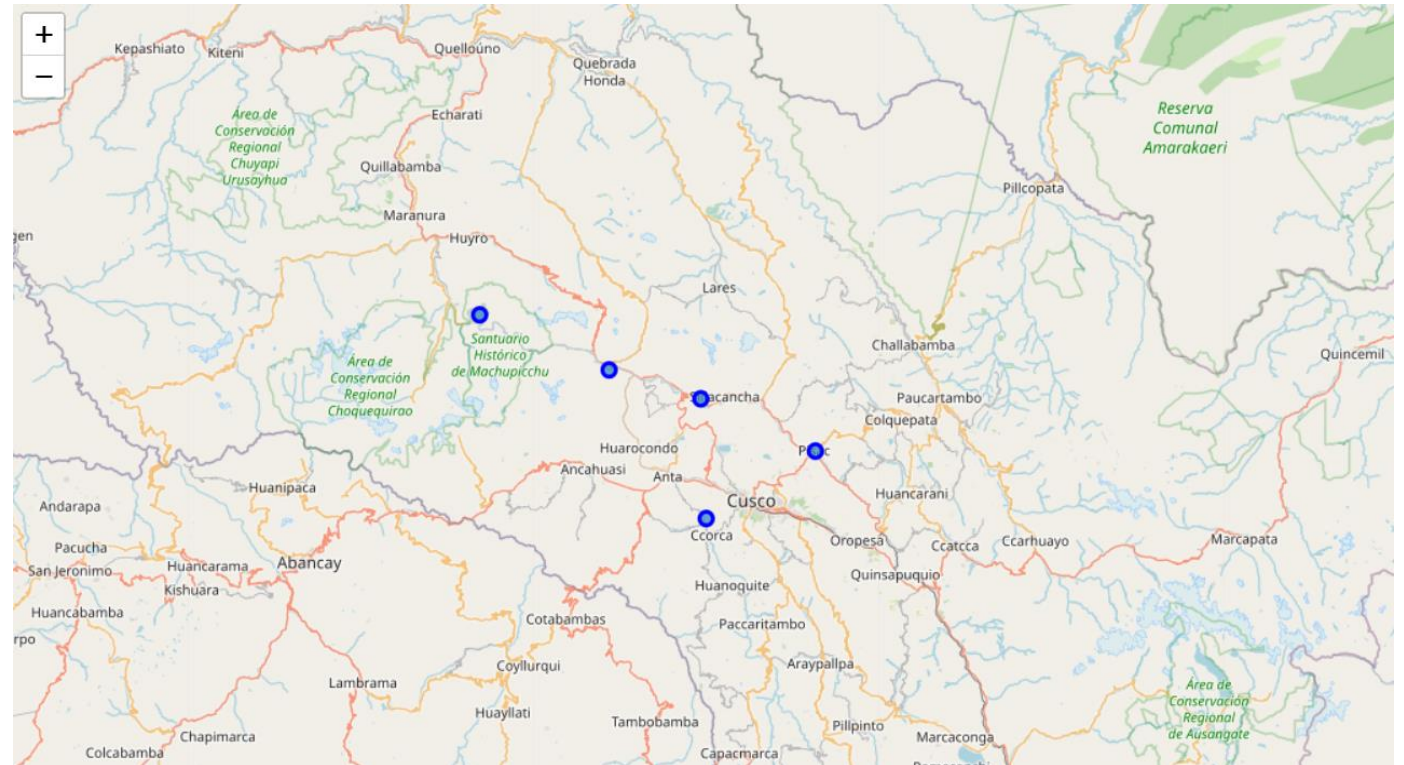
- Foursquare API (used to get information about venues in Cusco and Lima)

# Methodology

This process will be followed for each region separately:

- Scrapping Wikipedia website with the list of districts in Peru using BeautifulSoup -> Data filtered to get districts in Cusco and Lima -> Data stored in pandas Dataframe
- Retrieving each district coordinates using PositionStack API -> Data stored in pandas Dataframe
- Removing rows with districts that don't contain coordinates (Data cleaning)
- Selecting districts where most popular spots are located (according to the Ministry of Foreign Trade and Tourism report) -> Filter pandas Dataframe to get the selected districts information
- Get venues list in each district using Forsquare API -> Find top 10 common venue categories in each district
- Getting popular venues based on common venue categories and venue ratings
- Using K-Means algorithm, clustering ALL districts based on most common venue categories

Selected districts in **Cusco** shown in map:

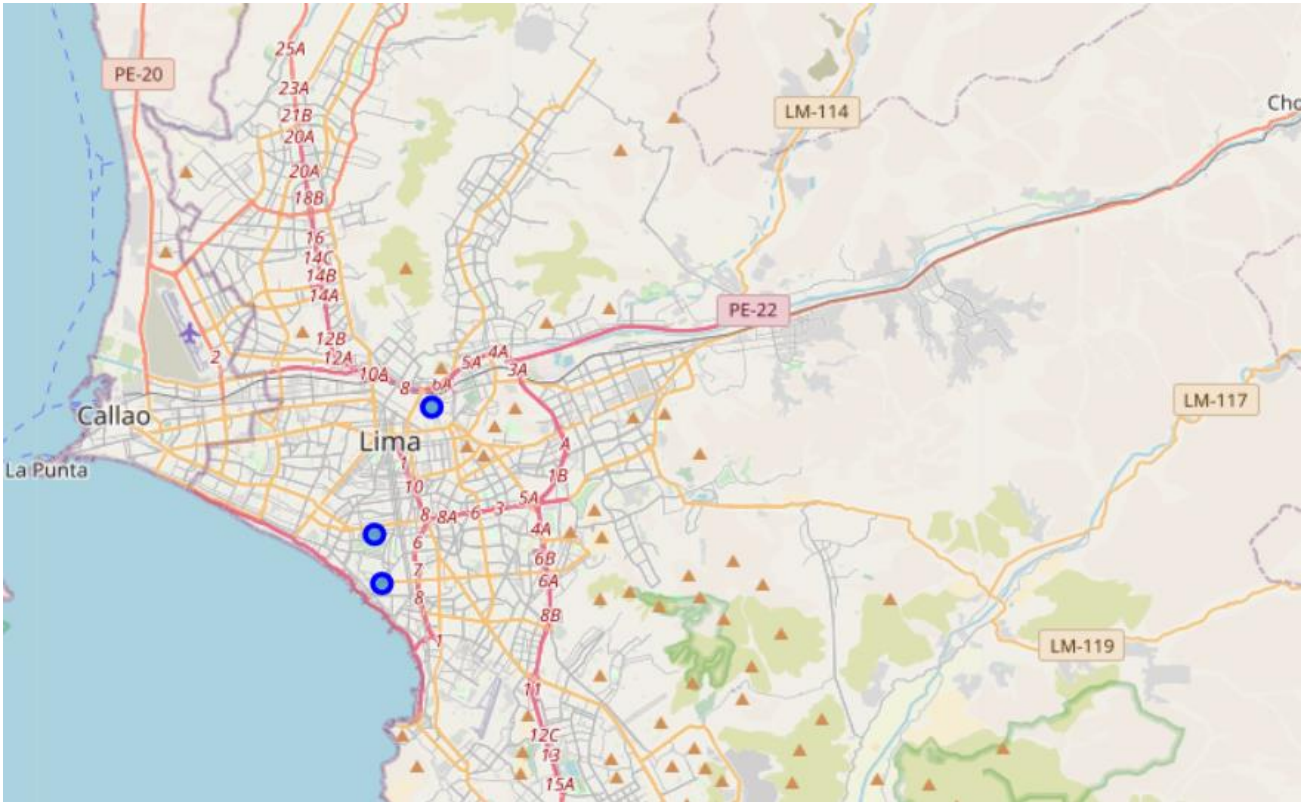


### Top 10 popular venue categories in the districts selected in **Cusco**

	District	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Machupicchu	Hotel	Trail	Peruvian Restaurant	Hostel	Bed & Breakfast	Restaurant	Zoo	Italian Restaurant	Buffet	Food
1	Ollantaytambo	Hotel	Café	Train Station	Breakfast Spot	Peruvian Restaurant	Zoo	Italian Restaurant	Bed & Breakfast	Buffet	Food
2	Pisac	Café	Jewelry Store	Peruvian Restaurant	Hotel	Latin American Restaurant	Market	Bakery	Plaza	Restaurant	Pizza Place
3	Yucay	Peruvian Restaurant	Café	Pizza Place	Hotel	Zoo	Italian Restaurant	Bed & Breakfast	Breakfast Spot	Buffet	Food

# Results

Selected districts in **Lima** shown in map:



Top 10 popular venue categories in selected districts in Lima

	District	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	Lima	Chinese Restaurant	Seafood Restaurant	Bakery	History Museum	Furniture / Home Store	Market	Dim Sum Restaurant	Park	College Academic Building	Plaza
1	Miraflores	Park	Seafood Restaurant	Café	Coffee Shop	Italian Restaurant	Restaurant	Hostel	Peruvian Restaurant	Chinese Restaurant	Ice Cream Shop
2	San Isidro	Hotel	Peruvian Restaurant	Coffee Shop	Restaurant	Italian Restaurant	Steakhouse	Yoga Studio	Park	Bistro	Hotel Bar

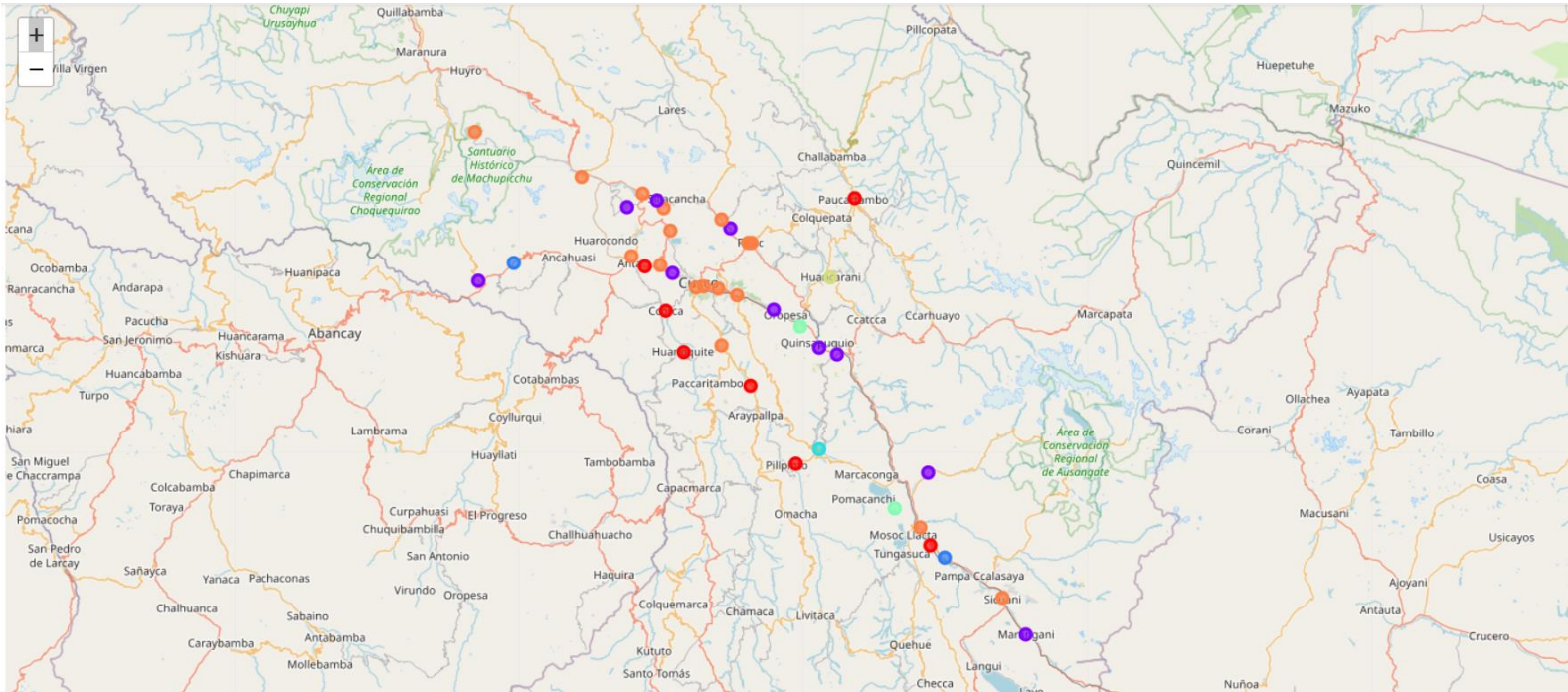


# Results

Venues in Cusco (including all districts), in total 53 venue categories:

	District	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Ccorca	-13.585	-72.05972	Plaza Ccorca	-13.582261	-72.060280	Plaza
1	Poroy	-13.495	-72.04333	PeruRail - Estación Poroy   Poroy Station (Est...	-13.494642	-72.042468	Train Station
2	Poroy	-13.495	-72.04333	La Olla Peruana	-13.493507	-72.042513	Peruvian Restaurant
3	Poroy	-13.495	-72.04333	Arco de Ticatica	-13.494541	-72.042780	Historic Site
4	Poroy	-13.495	-72.04333	Chicharroneria Santa Barbara	-13.493830	-72.045506	BBQ Joint

The clustering resulted in 7 groups of districts and popular venue categories for each one:





# Results

## Cluster 1:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
697	Coorca	0.0	Plaza	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
706	Acos	0.0	Plaza	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
718	Pucyura	0.0	Plaza	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
743	Tinta	0.0	History Museum	Plaza	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
774	Paruro	0.0	Shopping Mall	Plaza	Zoo	Clothing Store	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
778	Huanoquite	0.0	Bakery	Plaza	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market
783	Paucartambo	0.0	Park	Plaza	Zoo	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field

## Cluster 2:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
698	Poroy	1.0	Peruvian Restaurant	Historic Site	Train Station	BBQ Joint	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food	Flea Market
717	Mollepata	1.0	Peruvian Restaurant	Bed & Breakfast	Restaurant	Farmers Market	Zoo	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food
721	Coya	1.0	Trail	Peruvian Restaurant	Plaza	Zoo	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food	Flea Market
739	Marangani	1.0	Peruvian Restaurant	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
740	Pitumarca	1.0	Peruvian Restaurant	Farm	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market
790	Andahuaylillas	1.0	Peruvian Restaurant	Plaza	History Museum	Zoo	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food	Flea Market
795	Huaro	1.0	Lake	Peruvian Restaurant	Plaza	Zoo	History Museum	Grocery Store	General Entertainment	Gas Station	Food	Flea Market
799	Oropesa	1.0	Zoo	Peruvian Restaurant	Restaurant	Plaza	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food	Flea Market
805	Maras	1.0	Plaza	Arts & Crafts Store	Restaurant	Peruvian Restaurant	Zoo	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food
807	Yucay	1.0	Peruvian Restaurant	Pizza Place	Café	Zoo	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food	Flea Market

# Results

## Cluster 3:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
716	Limatambo	2.0	History Museum	Hostel	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field	Fast Food Restaurant
742	San Pedro	2.0	History Museum	Historic Site	Hostel	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field	Fast Food Restaurant

## Cluster 4:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
704	Acomayo	3.0	Park	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field

## Cluster 5:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
705	Acopia	4.0	Lake	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
796	Lucre	4.0	Lake	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field

## Cluster 6:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
787	Huancarani	5.0	Café	Zoo	Deli / Bodega	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field

# Results

## Cluster 7:

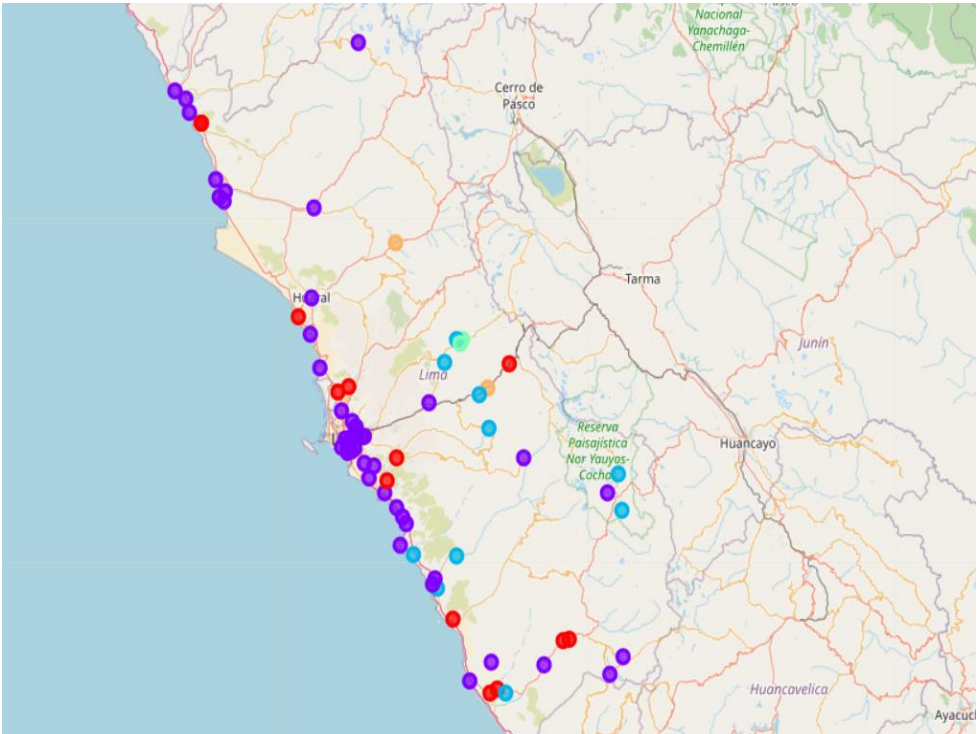
	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
699	San Jerónimo	6.0	Hotel	Latin American Restaurant	Flea Market	Plaza	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food	Field
700	San Sebastián	6.0	Hotel	Supermarket	Plaza	Soup Place	Rental Car Location	Grocery Store	Clothing Store	General Entertainment	Gas Station	Food
701	Santiago	6.0	Hotel	Bus Station	Hostel	Plaza	Jewelry Store	Shopping Mall	Farmers Market	Asian Restaurant	Grocery Store	General Entertainment
703	Wánchaq	6.0	Hotel	Bed & Breakfast	Seafood Restaurant	Arts & Crafts Store	Train Station	Bus Station	Pizza Place	Plaza	Breakfast Spot	Asian Restaurant
711	Anta	6.0	Soccer Field	Zoo	Clothing Store	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
713	Cachimayo	6.0	General Entertainment	Bike Trail	Zoo	Deli / Bodega	Historic Site	Grocery Store	Gas Station	Food	Flea Market	Field
722	Lamay	6.0	Hotel	Latin American Restaurant	Fast Food Restaurant	Peruvian Restaurant	Resort	Deli / Bodega	Grocery Store	General Entertainment	Gas Station	Food
724	Pisac	6.0	Jewelry Store	Peruvian Restaurant	Café	Latin American Restaurant	Market	Restaurant	Hotel	Bakery	Arts & Crafts Store	Plaza
726	Taray	6.0	Jewelry Store	Café	Latin American Restaurant	Peruvian Restaurant	Market	Restaurant	Plaza	Bakery	Arts & Crafts Store	Field
736	Sicuani	6.0	Hotel	Italian Restaurant	Fast Food Restaurant	Peruvian Restaurant	Restaurant	Bus Station	Plaza	Deli / Bodega	General Entertainment	Gas Station
738	Combapata	6.0	Rest Area	Zoo	Clothing Store	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
752	Espinar	6.0	Restaurant	Hotel	Pizza Place	Clothing Store	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field
766	Kimbiri	6.0	Deli / Bodega	Bus Station	Zoo	Historic Site	Grocery Store	General Entertainment	Gas Station	Food	Flea Market	Field

# Results

Venues in Lima (including all districts), in total 165 venue categories:

	District	District Latitude	District Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Lima	-12.049141	-77.021217	Restaurante La Buena Muerte	-12.048123	-77.022988	Seafood Restaurant
1	Lima	-12.049141	-77.021217	Chifa Kong	-12.051862	-77.024901	Chinese Restaurant
2	Lima	-12.049141	-77.021217	Escuela Nacional Superior Autónoma de Bellas A...	-12.046799	-77.023974	College Academic Building
3	Lima	-12.049141	-77.021217	Wa Lok	-12.052227	-77.025085	Chinese Restaurant
4	Lima	-12.049141	-77.021217	Museo de la Moneda	-12.049476	-77.023991	History Museum

The clustering resulted in 5 groups of districts and popular venue categories for each one:



# Results

## Cluster 1:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1283	Carabayllo	0.0	Peruvian Restaurant	Restaurant	Latin American Restaurant	Yoga Studio	Falafel Restaurant	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1286	Cieneguilla	0.0	Historic Site	Stables	Peruvian Restaurant	Yoga Studio	Exhibit	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1300	Pachacámac	0.0	Plaza	Peruvian Restaurant	Italian Restaurant	Breakfast Spot	City	Yoga Studio	Falafel Restaurant	Food	Flea Market	Fish & Chips Shop
1302	Puente Piedra	0.0	Peruvian Restaurant	Yoga Studio	Falafel Restaurant	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1324	Supe	0.0	History Museum	Peruvian Restaurant	Shopping Mall	Plaza	Falafel Restaurant	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1325	Supe puerto	0.0	History Museum	Peruvian Restaurant	Shopping Mall	Plaza	Falafel Restaurant	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1338	San Vicente de Cañete	0.0	Peruvian Restaurant	Bus Station	Market	Restaurant	City	Plaza	Gym / Fitness Center	Donut Shop	Fast Food Restaurant	Farmers Market
1339	Asia	0.0	City	Peruvian Restaurant	Exhibit	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1344	Imperial	0.0	Hotel	Bus Station	Peruvian Restaurant	Plaza	Health & Beauty Service	Electronics Store	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1348	Pacaran	0.0	Peruvian Restaurant	Latin American Restaurant	Yoga Studio	Falafel Restaurant	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1353	Zuñiga	0.0	Plaza	Peruvian Restaurant	Historic Site	Exhibit	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1358	Chancay	0.0	American Restaurant	History Museum	Flea Market	Peruvian Restaurant	Yoga Studio	Falafel Restaurant	Food & Drink Shop	Food	Fish & Chips Shop	Fast Food Restaurant
1387	San Mateo	0.0	Accessories Store	Peruvian Restaurant	Department Store	Motel	Plaza	Electronics Store	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market

# Results

## Cluster 2:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1278	Lima	1.0	Chinese Restaurant	Seafood Restaurant	Bakery	Furniture / Home Store	Restaurant	Market	College Academic Building	Dim Sum Restaurant	History Museum	Park
1279	Ancón	1.0	Seafood Restaurant	Beach	Ice Cream Shop	Dessert Shop	Yoga Studio	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant
1280	Ate	1.0	Fast Food Restaurant	Peruvian Restaurant	Chinese Restaurant	Breakfast Spot	Soccer Field	Seafood Restaurant	Coffee Shop	Burger Joint	BBQ Joint	Park
1287	Comas	1.0	Bus Station	Cupcake Shop	Soccer Field	Snack Place	Restaurant	Seafood Restaurant	Falafel Restaurant	Flea Market	Fish & Chips Shop	Fast Food Restaurant
1288	El Agustino	1.0	Fried Chicken Joint	Bus Station	Plaza	Cemetery	Big Box Store	Farmers Market	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop
1289	Independencia	1.0	Home Service	Furniture / Home Store	Falafel Restaurant	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1293	Lince	1.0	Seafood Restaurant	Peruvian Restaurant	Park	Bakery	Restaurant	Italian Restaurant	Café	Burger Joint	Latin American Restaurant	Market
1295	Lurigancho	1.0	Fried Chicken Joint	Restaurant	Chinese Restaurant	Gym	Grocery Store	Park	Seafood Restaurant	Climbing Gym	Fast Food Restaurant	Juice Bar
1296	Lurin	1.0	Plaza	Shopping Mall	Market	BBQ Joint	Grocery Store	Supermarket	Juice Bar	Falafel Restaurant	Flea Market	Fish & Chips Shop
1297	Magdalena del Mar	1.0	Café	Italian Restaurant	Peruvian Restaurant	Coffee Shop	Seafood Restaurant	Fried Chicken Joint	Pizza Place	Restaurant	Cupcake Shop	Burger Joint
1299	Miraflores	1.0	Park	Seafood Restaurant	Café	Coffee Shop	Restaurant	Italian Restaurant	Supermarket	Chinese Restaurant	Peruvian Restaurant	Hostel
1301	Pucusana	1.0	Beach	Park	Cajun / Creole Restaurant	Italian Restaurant	Harbor / Marina	Falafel Restaurant	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant
1303	Punta Hermosa	1.0	Beach	Ice Cream Shop	Juice Bar	Scenic Lookout	Beer Garden	Yoga Studio	Farm	Food & Drink Shop	Food	Flea Market

# Results

## Cluster 3:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1340	Calango	2.0	Plaza	Seafood Restaurant	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm	Falafel Restaurant	Exhibit
1342	Chilca	2.0	Plaza	Asian Restaurant	Beach	Falafel Restaurant	Food Court	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant
1346	Mala	2.0	Plaza	Recreation Center	Restaurant	Electronics Store	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1347	Nuevo imperial	2.0	Plaza	Ice Cream Shop	Campground	Exhibit	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1377	Laraos	2.0	Plaza	Mountain	Cupcake Shop	Department Store	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1383	San Damián	2.0	Plaza	Food Truck	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm	Falafel Restaurant
1389	San Pedro de Casta	2.0	Campground	Yoga Studio	Food Truck	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1397	Surco	2.0	Home Service	Plaza	Mountain	Cupcake Shop	Department Store	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant
1429	Huancaya	2.0	Chocolate Shop	Campground	Yoga Studio	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1433	Laraos	2.0	Plaza	Mountain	Cupcake Shop	Department Store	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market



# Results

## Cluster 4:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1369	Carampoma	3.0	Mountain	Food Truck	Food Court	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm
1384	San Juan de Iris	3.0	Mountain	Food Truck	Food Court	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market	Farm

## Cluster 5:

	District	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
1362	San Miguel de acos	4.0	Latin American Restaurant	Yoga Studio	Farm	Food Court	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market
1366	Matucana	4.0	Motel	Latin American Restaurant	Farm	Food Court	Food & Drink Shop	Food	Flea Market	Fish & Chips Shop	Fast Food Restaurant	Farmers Market

# Discussion

- Important note: some of the provinces and districts have the same name -> difficulties when retrieving coordinates and exploring venues
- Exploring Cusco: most common venue categories in the 4 considered districts are hotels and restaurants, but also zoos, train stations and trails -> Possible to recommend venues from each category based on rating
- Exploring Lima: most common categories near popular spots are hotel and restaurants too, but the cuisine is more diverse, and also parks -> Possible to recommend venues from each category based on rating
- Limitation about the possible requests to the Foursquare API to get the venue details such as the rating
- Segmentation in Cusco: First cluster with plazas, zoos, and historic sites, Second cluster with restaurants, zoos, historic places and museums, Third cluster with history museums and historic sites, Fourth/Fifth/Sixth cluster with nature attractions such as parks, lakes, and zoos, and Seventh cluster with hotels and restaurants
- Segmentation in Lima: First cluster with restaurants, historic sites and stores, Second cluster with restaurant of diverse cuisine, beaches, parks and hotels, Third cluster with plazas, and Fourth/Fifth clusters with mountains, farms and restaurants.

# Conclusion

- Possible to recommend new places to future tourists based on exploration around already popular spots in Cusco and Lima
- Segmentation permits creation of clusters of districts in Cusco and Lima regions based on attractions' categories and match clusters with tourists' interests