

THE BATTLE OF THE NEIGHBORHOODS

Coursera Capstone Project

By Sebastian Bedoya

BUSINESS PROBLEM

- Substantial increment of remote work
 - Pandemic
 - Better quality of life
 - Better personal or professional satisfaction
- ¿Looking to move to a English spoken Country?



Opportunity?

DATA SOURCES

Find the Coordinates



Web Scrapping

Web Scrapping

The 30 best rated courses by:
<https://www.languageinternational.com/>

API to look for venues categories



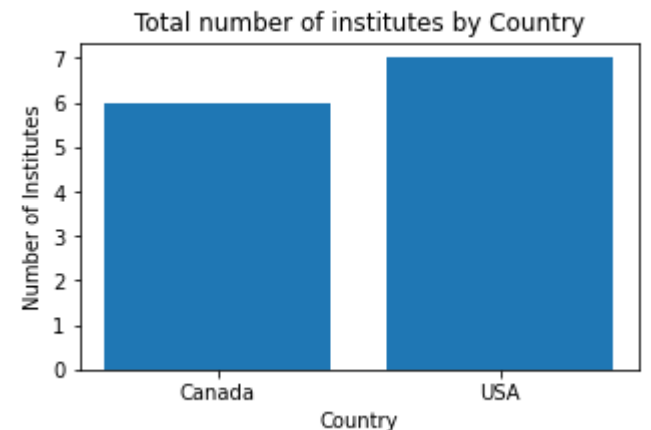
Let's find the best option of English courses closer
to your preferences!!!

DATA EXTRACTION

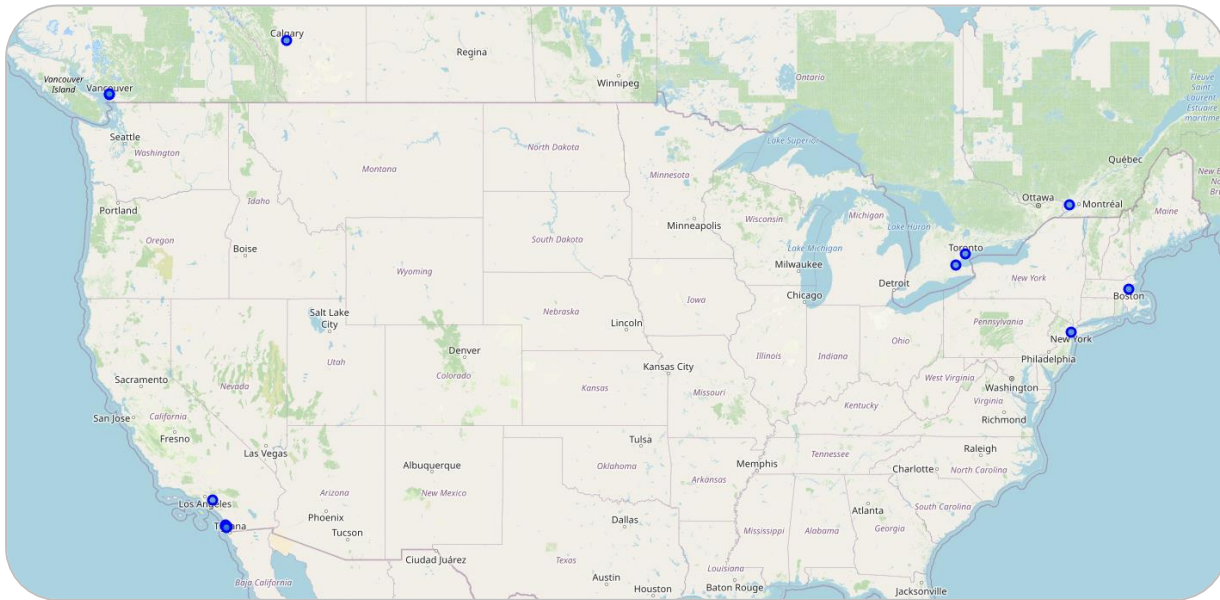
Courses with their coordinates

Location	CourseName	InstituteName	PriceFrom	PriceTo	Address	urlcourse	urlinstitute	latitude	longitude	Country
Calgary, Canada	General English 20 (GE20)	ANNE'S Language House	354	687	101 6th Avenue S.W., Suite 1250, Calgary, Albe...	/course/general-english-20-ge20-anne-s-languag...	/school/anne-s-language-house-64694	51.04715	-114.06334	Canada
Hamilton, Canada	ESL Private Lessons	Metropolitan College	384	619	146 James Street South, Hamilton, Ontario,, Ha...	/course/esl-private-lessons-metropolitan-colle...	/school/metropolitan-college-64750	43.25243	-79.8713	Canada
Calgary, Canada	General English (GE25)	ANNE'S Language House	384	717	101 6th Avenue S.W., Suite 1250, Calgary, Albe...	/course/general-english-ge25-anne-s-language-h...	/school/anne-s-language-house-64694	51.04715	-114.06334	Canada
Hamilton, Canada	Intensive English	Metropolitan College	290	525	146 James Street South, Hamilton, Ontario,, Ha...	/course/intensive-english-metropolitan-college...	/school/metropolitan-college-64750	43.25243	-79.8713	Canada
Vancouver, Canada	General 20	Language Studies International (LSI): Vancouver	431	759	101-808 Nelson Street, Vancouver, BC V6Z 2H2, ...	/course/general-20-language-studies-internatio...	/school/language-studies-international-lsi-van...	49.28004	-123.12491	Canada

The 30 courses are offered by 13 institutes



WHERE ARE THEY?



- Far one from each other!
- Hard decision?
- Personal interests

NEAR BY LOCATIONS?

InstituteName	
ANNE'S Language House	41
American English Language School	21
Bouchereau Lingua International	5
Connect English Language Institute- Mission Valley	16
Connect English Language Institute- San Diego (Pacific Beach Campus)	13
Connect English- La Jolla	6
International Language Academy of Canada Vancouver	45
Language Studies International (LSI): Boston	82
Language Studies International (LSI): New York	100
Language Studies International (LSI): San Diego	23
Language Studies International (LSI): Toronto	42
Language Studies International (LSI): Vancouver	89
Metropolitan College	32

Metropolitan College	35
Language Studies International (LSI): Vancouver	88
Language Studies International (LSI): Toronto	45
Language Studies International (LSI): San Diego	23

151

unique **Categories**

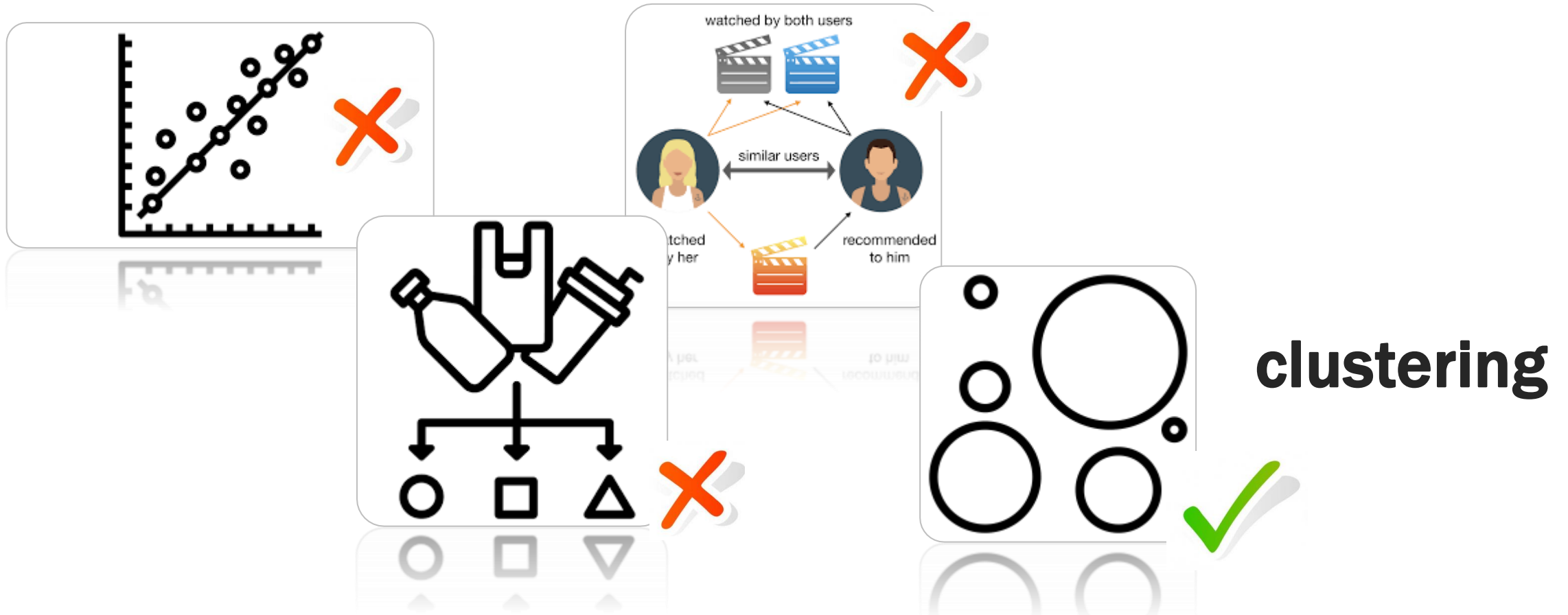
More than 510

Venues

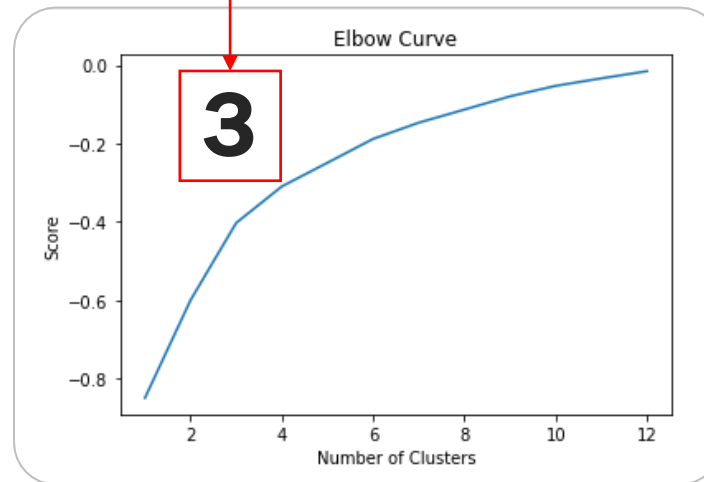
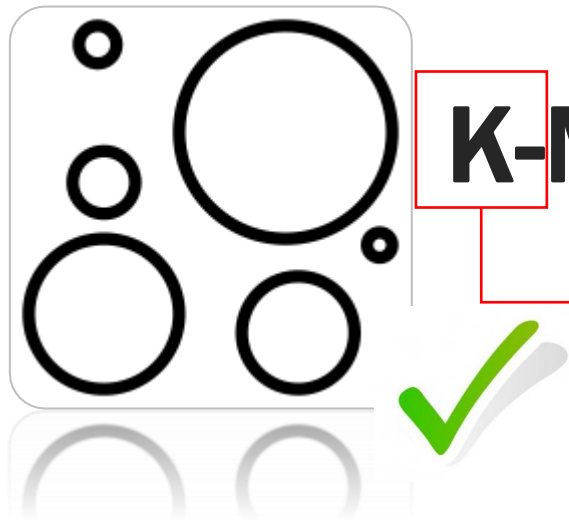
COMMON VENUES?

InstituteName	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
ANNE'S Language House	Restaurant	Hotel	Performing Arts Venue	Coffee Shop	Theater
American English Language School	Coffee Shop	Yoga Studio	Gym / Fitness Center	Food Truck	Gas Station
Bouchereau Lingua International	Diner	Home Service	Supermarket	Chocolate Shop	Construction & Landscaping
Connect English Language Institute- Mission Va...	Martial Arts School	Gym	Climbing Gym	Clothing Store	Rental Car Location
Connect English Language Institute- San Diego ...	Convenience Store	Hotel	Intersection	Thai Restaurant	Marijuana Dispensary
Connect English- La Jolla	Park	Scenic Lookout	Sporting Goods Shop	Golf Course	Flower Shop
International Language Academy of Canada Vanco...	Hotel	Restaurant	American Restaurant	Cosmetics Shop	Steakhouse
Language Studies International (LSI): Boston	Bakery	Chinese Restaurant	Asian Restaurant	Coffee Shop	Food Truck
Language Studies International (LSI): New York	Park	Pizza Place	Coffee Shop	Memorial Site	Hotel
Language Studies International (LSI): San Diego	Hotel	Park	Spa	Boutique	Deli / Bodega
Language Studies International (LSI): Toronto	Italian Restaurant	Coffee Shop	Park	Spa	Café
Language Studies International (LSI): Vancouver	Hotel	Bakery	Japanese Restaurant	Mexican Restaurant	French Restaurant
Metropolitan College	Pub	Coffee Shop	Sandwich Place	Italian Restaurant	Park
Metropolitan College	Pub	Coffee Shop	Sandwich Place	Italian Restaurant	Park
Language Studies International (LSI): Vancouver	Hotel	Bakery	Japanese Restaurant	Mexican Restaurant	French Restaurant

METHODOLOGY?

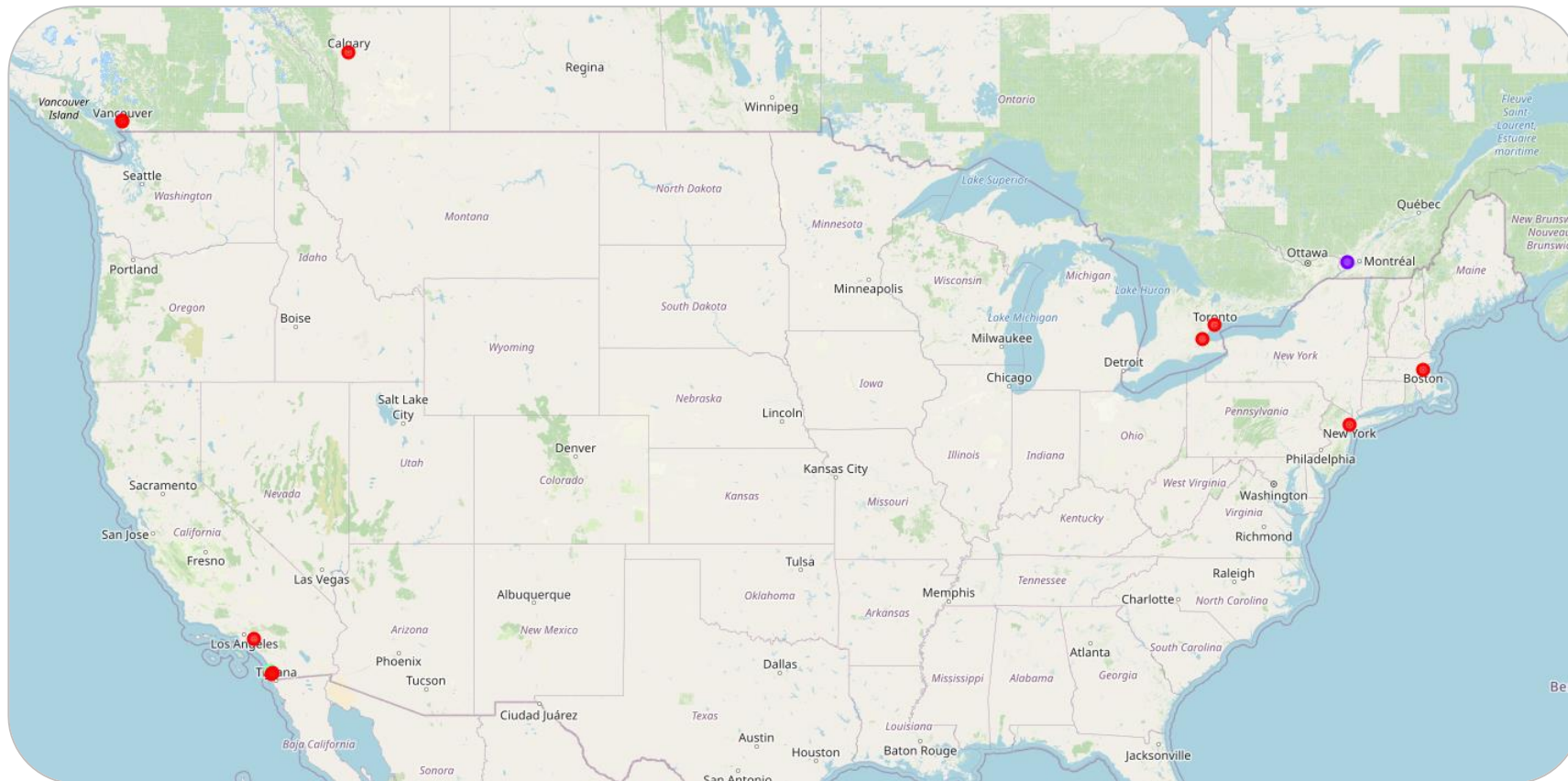


CLUSTERING



**Selection of the
best K with Elbow
Method**

CLUSTERING



CLUSTERING

latitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
51.04715	Restaurant	Hotel	Performing Arts Venue	Coffee Shop	Theater
43.25243	Pub	Coffee Shop	Sandwich Place	Italian Restaurant	Park
43.67851	Italian Restaurant	Coffee Shop	Park	Spa	Café
49.28004	Hotel	Bakery	Japanese Restaurant	Mexican Restaurant	French Restaurant
49.28836	Hotel	Restaurant	American Restaurant	Cosmetics Shop	Steakhouse
32.80372	Convenience Store	Hotel	Intersection	Thai Restaurant	Marijuana Dispensary
32.78098	Martial Arts School	Gym	Climbing Gym	Clothing Store	Rental Car Location
33.90986	Coffee Shop	Yoga Studio	Gym / Fitness Center	Food Truck	Gas Station
42.35072	Bakery	Chinese Restaurant	Asian Restaurant	Coffee Shop	Food Truck
40.70863	Park	Pizza Place	Coffee Shop	Memorial Site	Hotel
32.72327	Hotel	Park	Spa	Boutique	Deli / Bodega

latitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
45.466221	Diner	Home Service	Supermarket	Chocolate Shop	Construction & Landscaping

latitude	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue
32.85252	Park	Scenic Lookout	Sporting Goods Shop	Golf Course	Flower Shop

• Diverse public → Cluster0

• Easier decision → Cluster 1 and 2

Name	Cluster
LEISURE, STUDENTS, TOURISTS	0
FAMILIAR	1
NATURE LOVERS	2

DETAILS

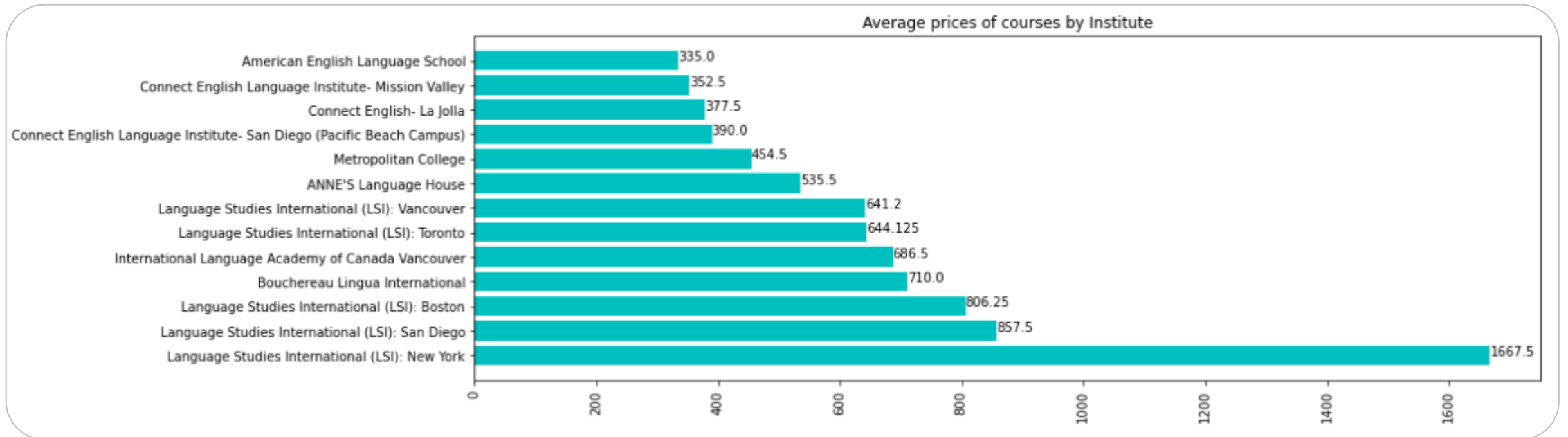
	InstituteName	Country	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	Location	CourseName	PriceFrom	PriceTo	Address
0	ANNE'S Language House	Canada	0	Restaurant	Hotel	Performing Arts Venue	Coffee Shop	Theater	Calgary, Canada	General English 20 (GE20)	354.0	687.0	101 6th Avenue S.W., Suite 1250, Calgary, Albe...
1	ANNE'S Language House	Canada	0	Restaurant	Hotel	Performing Arts Venue	Coffee Shop	Theater	Calgary, Canada	General English (GE25)	384.0	717.0	101 6th Avenue S.W., Suite 1250, Calgary, Albe...
2	Metropolitan College	Canada	0	Pub	Coffee Shop	Sandwich Place	Italian Restaurant	Park	Hamilton, Canada	ESL Private Lessons	384.0	619.0	146 James Street South, Hamilton, Ontario,, Ha...
3	Metropolitan College	Canada	0	Pub	Coffee Shop	Sandwich Place	Italian Restaurant	Park	Hamilton, Canada	Intensive English	290.0	525.0	146 James Street South, Hamilton, Ontario,, Ha...
4	Language Studies International (LSI): Toronto	Canada	0	Italian Restaurant	Coffee Shop	Park	Spa	Café	Toronto, Canada	Intensive 30	495.0	823.0	1055 Yonge Street, Suite #210, Toronto, ON M4W...

PRICING

	InstituteName	Cluster Labels	PriceFrom	PriceTo	PriceAvg
0	Language Studies International (LSI): New York	LEISURE, STUDENTS, TOURISTS	1505.000000	1830.000000	1667.500
1	Language Studies International (LSI): San Diego	LEISURE, STUDENTS, TOURISTS	673.333333	1041.666667	857.500
2	Language Studies International (LSI): Boston	LEISURE, STUDENTS, TOURISTS	648.750000	963.750000	806.250
3	Bouchereau Lingua International	FAMILIAR	533.000000	887.000000	710.000
4	International Language Academy of Canada Vanco...	LEISURE, STUDENTS, TOURISTS	503.000000	870.000000	686.500
5	Language Studies International (LSI): Toronto	LEISURE, STUDENTS, TOURISTS	480.000000	808.250000	644.125
6	Language Studies International (LSI): Vancouver	LEISURE, STUDENTS, TOURISTS	477.000000	805.400000	641.200
7	ANNE'S Language House	LEISURE, STUDENTS, TOURISTS	369.000000	702.000000	535.500
8	Metropolitan College	LEISURE, STUDENTS, TOURISTS	337.000000	572.000000	454.500
9	Connect English Language Institute- San Diego ...	LEISURE, STUDENTS, TOURISTS	390.000000	390.000000	390.000
10	Connect English- La Jolla	NATURE LOVERS	377.500000	377.500000	377.500
11	Connect English Language Institute- Mission Va...	LEISURE, STUDENTS, TOURISTS	352.500000	352.500000	352.500
12	American English Language School	LEISURE, STUDENTS, TOURISTS	335.000000	335.000000	335.000

**Courses are between 335
USD and 1667 USD**

PRICING



DISCUSSION AND RESULTS

- 30 courses selected → 13 institutes are offering them
- **151 unique categories were identified (radius 500 meters)**
- 3 clusters
 - LEISURE, STUDENTS, TOURISTS
 - FAMILIAR
 - NATURE LOVERS
- Big opportunity of improvement of this model
 - New variables weather, temperature or cost of living

DISCUSSION AND RESULTS

Explanation of why the prices

- Reviews
- Ratings
- Comments
- Duration

Next steps!