



VEGETARIAN/VEGAN RESTAURANTS

EXPANSION TO EUROPE



BUSINESS PROBLEM

- Our client is looking to expand their successful vegetarian/vegan restaurant chain
 - Current restaurants are dotted all over North America
- Which European capital cities would be suitable for the first pilot restaurant(s)?
 - Limited to Western- and Northern Europe

CITIES TO BE INCLUDED IN STUDY



- The client has given us a list of cities to explore:
 - Vienna, Austria
 - Brussels, Belgium
 - Prague, Czech Republic
 - Copenhagen, Denmark
 - Helsinki, Finland
 - Paris, France
 - Berlin, Germany
 - Rome, Italy
 - Dublin, Ireland
 - Amsterdam, The Netherlands
 - Oslo, Norway
 - Warsaw, Poland
 - Lisbon, Portugal
 - Madrid, Spain
 - Stockholm, Sweden
 - Bern, Switzerland
 - London, United Kingdom

FEATURES TO BE INCLUDED IN STUDY



- Various types of data has been collected about the countries and cities
 - Proportion of vegetarians and vegans in the population
 - Current vegetarian/vegan restaurants in the city center
 - Median disposable income per household

MACHINE LEARNING METHODS USED IN STUDY



- Missing data is included using a **linear regression model**, trained with the other cities
- Cities are clustered using a **k-means algorithm**
 - In 5 separate clusters
- Features are scaled using a **robust scaler**



RESULTS

CLUSTERED CITIES (SLIDE 1 OF 2)



- Based on the features (% of vegetarians/vegans, # of vegetarian/vegan restaurants, and disposable income), cities have been clustered into 5 groups
- Cluster 0: low number of vegetarians/vegans, medium number of current vegetarian/vegan restaurants, low disposable income.
 - Prague, Paris, Lisbon and Madrid
- Cluster 1: **high** number of vegetarians/vegans, medium-to-high number of current vegetarian/vegan restaurants, medium-to-high disposable income.
 - Vienna, Brussels, Copenhagen, Helsinki, Berlin, Rome, Dublin and Stockholm
- Cluster 2: **very high** number of vegetarians/vegans, **very high** number of current vegetarian/vegan restaurants, medium disposable income.
 - London

CLUSTERED CITIES (SLIDE 2 OF 2)



- Based on the features (% of vegetarians/vegans, # of vegetarian/vegan restaurants, and disposable income), cities have been clustered into 5 groups
- Cluster 3: low-to-medium number of vegetarians/vegans, low number of current vegetarian/vegan restaurants, **high** disposable income.
 - Amsterdam, Oslo and Bern
- Cluster 4: medium number of vegetarians/vegans, low number of current vegetarian/vegan restaurants, lowest disposable income.
 - Warsaw

CONCLUSION



- We advise our client to first focus on the city in Cluster 2: **London, United Kingdom**
 - This city has a **very high** number of vegetarians/vegans, **very high** number of current vegetarian/vegan restaurants, and a medium disposable income.
- If this first franchise proves successful among the European public, we advise to move on to the cities in Cluster 1: Vienna, Brussels, Copenhagen, Helsinki, Berlin, Rome, Dublin and Stockholm

A man with a beard and short brown hair, wearing a grey V-neck sweater and a blue and white striped apron, stands in a doorway. He is smiling and holding a white sign with the word 'OPEN' in blue letters. The background shows a blurred interior of a shop or cafe with shelves and a cactus.

NEXT STOP: LONDON!

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