# IBM DS Capstone Project
# Applied Data Science Capstone by IBM/Coursera

## THE BATTLE OF NEIGHBORHOODS: CREATING NEW BELGIAN COFFEE SHOP IN LOS ANGELES

# Business Problem

SUCCESSFUL BELGIAN CHOCOLATIER IS GOING TO EXPAND HIS BUSINESS INTO THE UNITED STATES.

LOS ANGELES IS BIG AND HAS LOTS OF DIFFERENT COFFEE SHOPS AND CHOCOLATE CHOPS DEVELOPED BY FAMOUS BRANDS.

WE NEED DEEPER INSIGHT FROM AVAILABLE DATA IN ORDER TO DECIDE WHERE TO ESTABLISH THE FIRST BELGIAN COFFEE SHOP.

LOS ANGELES HAS VERY HIGH LEASE RENTS FOR RETAIL PROPERTY.

# Business Problem

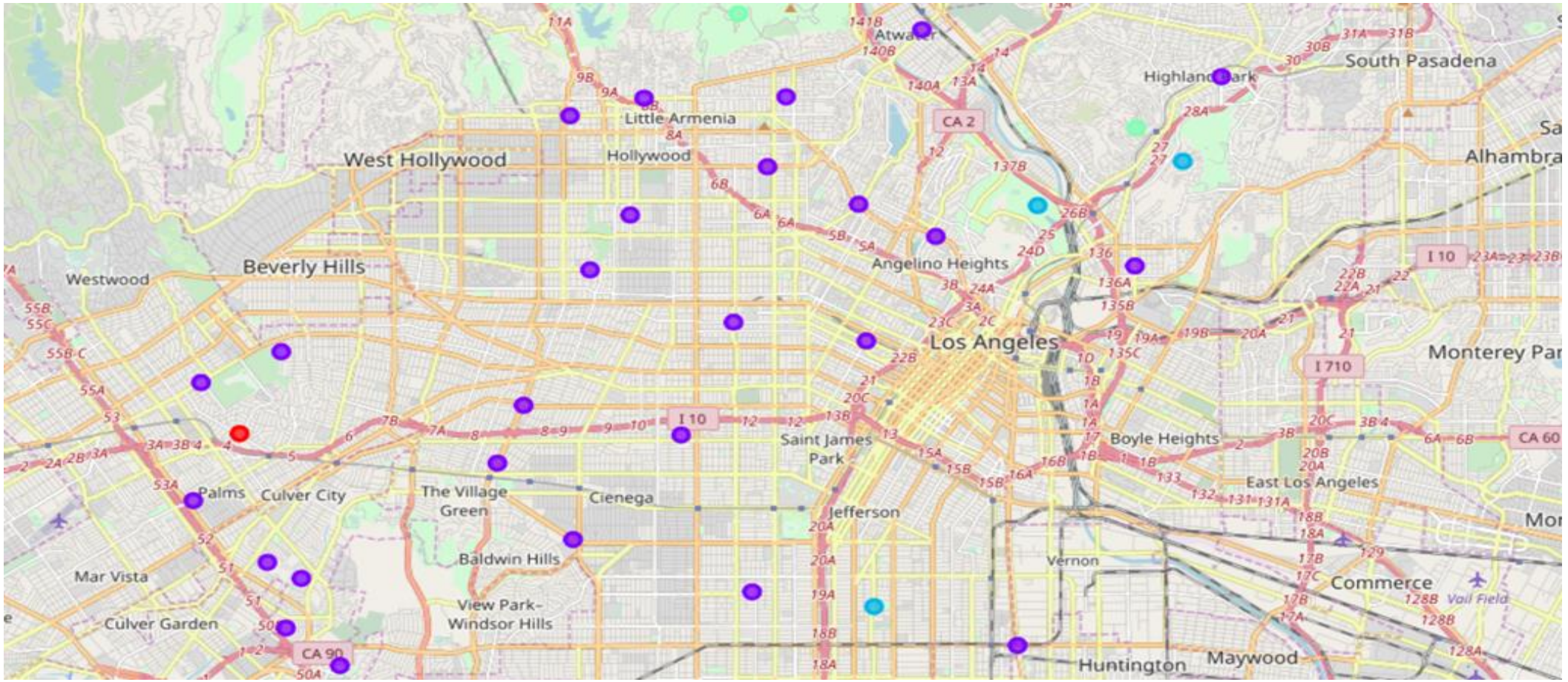
**HOW COULD WE PROVIDE SUPPORT TO THE BELGIAN CHOCOLATIER IN ESTABLISHING NEW BELGIAN COFFEE SHOP COMBINED WITH CHOCOLATE SHOP?**

# Solution

**CLUSTERING L.A. NEIGHBORHOODS TO RECOMMEND VENUES AND THE CURRENT AVERAGE RENT OF LEASE.**

**WE HAVE TO FIND THE OPTIMAL SOLUTION IN TERMS OF COMPETITIVE LOCATION, COMFORTABLE LEASE RENTS, AS WELL AS SURROUNDING VENUES.**

# K-Means clustering



# Results

- EXAMINATION OF L.A. NEIGHBORHOODS
- CLUSTER 3, CLUSTER 4 AND CLUSTER 5 HAVE POTENTIALLY INTERESTING AND ACCEPTABLE NEIGHBORHOODS. SELECTED NEIGHBORHOODS HAVE PROMISING COMBINATION OF VENUES
- IN CLUSTER 2 WE IDENTIFIED 4 POTENTIALLY INTERESTING NEIGHBORHOODS
- CLUSTER 1 DUE TO ITS VERY HIGH LEASE RENT IS NOT SELECTED
- 9 NEIGHBORHOODS CONTAINING LARGEST NUMBER OF POTENTIAL NEW COFFEE SHOPS LOCATIONS BASED ON NUMBER OF AND DISTANCE TO EXISTING VENUES