

# Selecting a Location Near a University to Open a Student Coffee Shop

## (Applied Data Science Capstone - Week 4 Report)

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### Introduction

The idea of studying in a coffee can more inviting than studying at a library. Researchers at the University of Illinois [1] found that ambient noise, such as the sound of coffee machines, boost the creativity. In their own words "...instead of burying oneself in a quiet room trying to figure out a solution, walking out of one's comfort zone and getting into a relatively noisy environment (such as a cafe') may trigger the brain to think abstractly, and thus generate creative ideas."

Based on students' constant need for coffee as a primary source of caffeine [2], investors can find a profitable business opportunity by opening a coffee shop that is focused primarily on serving students. Hence, the location of this coffee shop should be near or around a university campus. The selection of near which campus to start a coffee shop business that turns into a successful business can rely on several factors including the number of enrolled students at the university, number of coffee shops in the area and their distance from the campus, expected customers spending habits...etc.

### Business Problem

An investor who is interested in opening a coffee shop in Ontario, Canada, that is focused primarily on serving college students would need an answer to the following question: Near which university campus in Ontario should the investor consider starting his business?

### Target Audience

This study is targeted towards investors who are planning on starting a coffee shop business that is focused on serving college students. Also, real estate agencies could be interested in the results as to know best places to recommend for their customers who want to start a coffee shop business.

### Data

In order to answer our question, we will need the following data:

1. List of universities in Ontario, Canada. This Wikipedia page ([https://en.wikipedia.org/wiki/List\\_of\\_universities\\_in\\_Canada](https://en.wikipedia.org/wiki/List_of_universities_in_Canada)) contains a list of all universities in Canada, from which we will only consider universities in Ontario.
2. Although the Wikipedia page contains information about enrollment, it is not updated. We want most updated enrollment data, so we will take it from Universities Canada website: (<https://www.univcan.ca/universities/facts-and-stats/enrolment-by-university>)

3. We also consider the tuition fees data for each university as an indicator to income and spending habits for prospect customers.
4. The population of the cities in which the universities are located will be added for an overview of overall population in the city of the university. This data will be taken from the World Population Review website:  
(<http://worldpopulationreview.com/countries/canada-population/cities/>).
5. Foursquare API will be used to obtain data on coffee shops around target universities.

[1] Mehta, Ravi, Rui Zhu, and Amar Cheema. "Is noise always bad? Exploring the effects of ambient noise on creative cognition." *Journal of Consumer Research* 39, no. 4 (2012): 784-799

[2] Mahoney, Caroline R., Grace E. Giles, Bernadette P. Marriott, Daniel A. Judelson, Ellen L. Glickman, Paula J. Geiselman, and Harris R. Lieberman. "Intake of caffeine from all sources and reasons for use by college students." *Clinical Nutrition* 38, no. 2 (2019): 668-675.