

An aerial photograph of the New York City skyline, featuring numerous skyscrapers and the Empire State Building prominently in the center. The image is slightly hazy, suggesting a distant or elevated perspective.

APPLIED DATA SCIENCE  
CAPSTONE

# NEW YORK VS MELBOURNE

A photograph of the Melbourne skyline, showing a mix of modern and historic architecture. In the foreground, a large, ornate bridge with multiple arches spans a body of water. The sky is clear and blue.

A Tale of Two Cities



# CONTENTS

The background of the slide is a photograph of the Manhattan Bridge in New York City. The bridge's iconic steel towers and suspension cables are visible, framed by tall brick buildings on either side. The sky is overcast and grey. In the foreground, a 'ONE WAY' street sign and a 'DUMBO' banner are partially visible.

1. Introduction

2. Data

3. Methodology

4. Results

5. Recommendations/Conclusion

# INTRODUCTION

## 1.1 Business Case Scenario

I'm a post-graduate applicant considering offers from two universities - Columbia Journalism School in New York and the University of Melbourne. Both academic programs have equal value to me and the tie-breaker is city livability. I am measuring this by evaluating neighbourhood clusters in each city based on **three** key considerations before I make my choice.

## 1.2 Key Considerations

- Walking distance to each university  $\leq 5$  km (or 3.11 miles)
- Crime rate
- Availability of local attractions and venues

## 1.2 Other Target Audience

- University students considering relocation
- University academics and staff considering relocation
- Property investors targeting the university body
- Business owners targeting the university body

# DATA

## 2.1 New York Dataset

- FourSquare API to obtain local attractions and venues data via Explore call
- City of New York (NYPD Complaint Data) -  
<https://data.cityofnewyork.us/Public-Safety/NYPD-Complaint-Data-Historic/qgea-i56i>
- City of New York (Boundary Data) -  
<https://discover.data.vic.gov.au/dataset/crime-by-location-data-table>

## 2.2 Melbourne Dataset

- FourSquare API to obtain local attractions and venues data via Explore call
- Vic.gov.au Crime Statistics Agency Data Tables (Criminal Incidents) -  
<https://discover.data.vic.gov.au/dataset/crime-by-location-data-table>
- Australia Post data -  
[https://www.matthewproctor.com/australian\\_postcodes](https://www.matthewproctor.com/australian_postcodes)

## 2.3 Data Tools

- The geographical map will be created using Folium and FourSquare API
- Pandas will be used to calculate the average crime statistics of each area