



# New York City's Night Life

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## *Clustering and Segmentation of Neighborhood*

### Intruduction

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New York City is the most populous city in the United States, home to the headquarters of the United Nations and an important center for international diplomacy. It just might be the most diverse city on the planet, as it is home to over 8.6 million people and over 800 languages. It has many important sites for human development but also many places to keep the city alive at night.

New York City has the most known and important night clubs, shows and many more night events in the entire world. This is why this project will be based on the night life of New York City, so that anybody could see the segmentation of the night life of one of the most important cities in the world.

### Problem Description

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New York City received a ninth consecutive annual record of approximately 65.2 million tourists in 2018, counting not just overnight visitors but anyone visiting for the day from over 50 miles away, including commuters. Overall the city welcomed 37.9 million visitors who stayed overnight in 2018, of which 13.6 million were international.

Major destinations include the Empire State Building, Ellis Island, the Statue of Liberty on Liberty Island, Broadway theatre productions, Central Park, Times Square, Coney Island, the Financial District, museums, and sports stadiums.

Other major visitor activities include luxury shopping along Fifth and Madison Avenues; entertainment events such as the Tribeca Film Festival; Randalls Island music festivals such as Governors Ball, Panorama and Electric Zoo; and free performances in Central Park at Summerstage and Delacorte Theater. Many New York City ethnic enclaves, such as Jackson Heights, Flushing, and Brighton Beach are major shopping destinations for first and second generation Americans.

Due to this extended tourism there is a need to segment and classify neighborhoods with its night life, this means that every tourist will have acces to where they whan to experience in an easy way.

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## Target Audience

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This Capstone Project is targeted to tourist who wants to know which neighborhoods have the highest night life, this could affect the choice of the Hotel or Airbnb.

## Data Collection

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### Foursquare API

Foursquare API, a location data provider, will be used to make RESTful API calls to retrieve data about venues in different neighborhoods. This is the link to Foursquare Venue Category Hierarchy. Venues retrieved from all the neighborhoods are categorized broadly into 'Arts & Entertainment', 'College & University', 'Event', 'Food', 'Nightlife Spot', 'Outdoors & Recreation', etc. An extract of an API call is as follows:

<https://developer.foursquare.com/docs>

### New York City Dataset

New York City neighborhood data will be obtained by the open source data:

[https://cocl.us/new\\_york\\_dataset](https://cocl.us/new_york_dataset)

With this data we'll obtain the Borough, Neighborhood and the latitude and longitude in New York City. This will be done using the Python Geocoder package.