

NYC Budget Weekend Guide



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Agenda

1. Problem Statement
2. Background
3. Data Collection
4. Model
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6. Future Developments



Problem Statement

New York City is one of the most visited and most expensive cities in the world. I have created a weekend guide that allows users to visit NYC on a budget. We will explore a model that uses image recognition to classify 10 popular landmarks and an app that provides users with the history and some recommendations to do in the area.



Background

New York City is one of the most diverse cities in the world. Many people visit to explore great museums, public parks, landmarks, food, architecture, and culture. In 2019, 66.6 million people visited New York City. Many people think NYC is Manhattan but it is comprised of 5 boroughs: Queens, Brooklyn, Manhattan, Staten Island, and the Bronx.



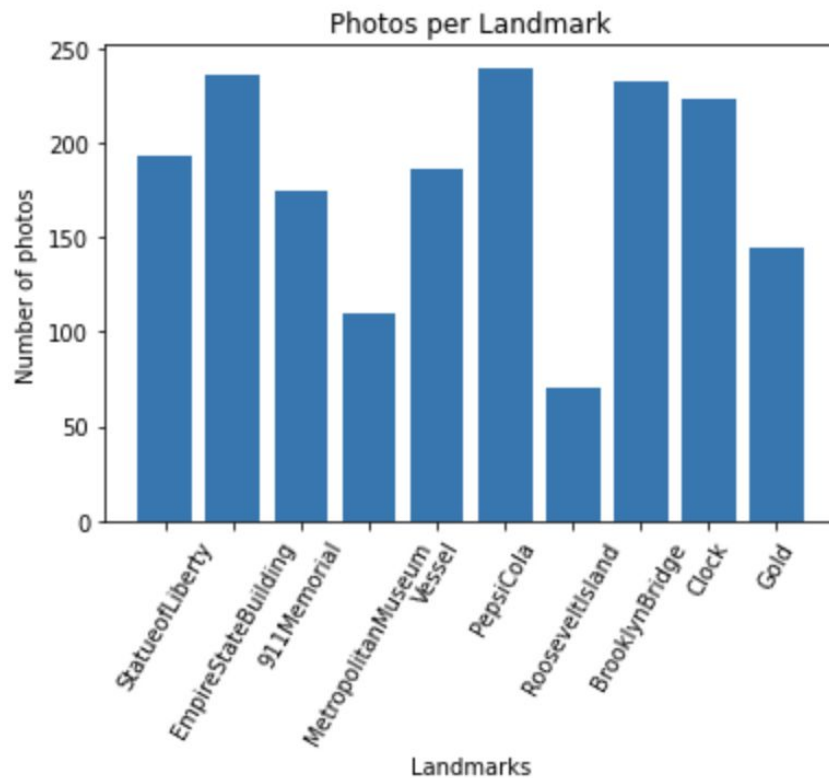
Data Collection

I collected 1810 images from Yelp and Google for:

- Empire State Building
- Statue of Liberty
- 9/11 Memorial
- Metropolitan Museum
- Brooklyn Bridge
- Grand Central Terminal
- Hudson Yards
- Gantry Plaza State Park
- Roosevelt Island
- Rockefeller Center



Data Collection



Model (Convolutional Neural Network)

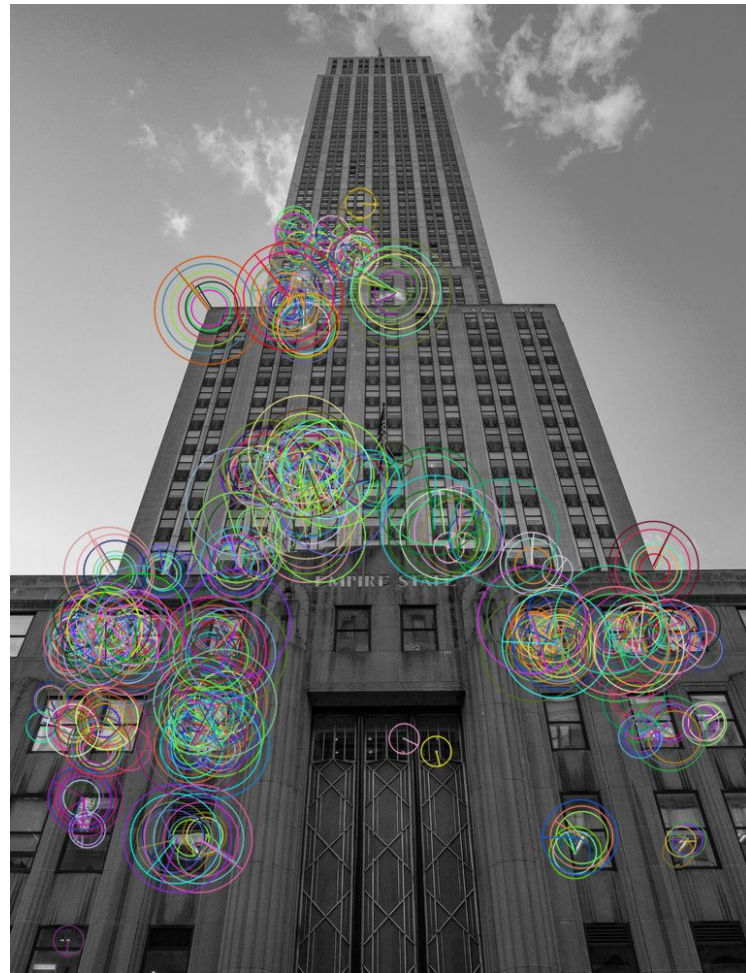
- Best Model: EfficientNet- B0
- Able to detect key features even with noise
- Accuracy Score of 96%



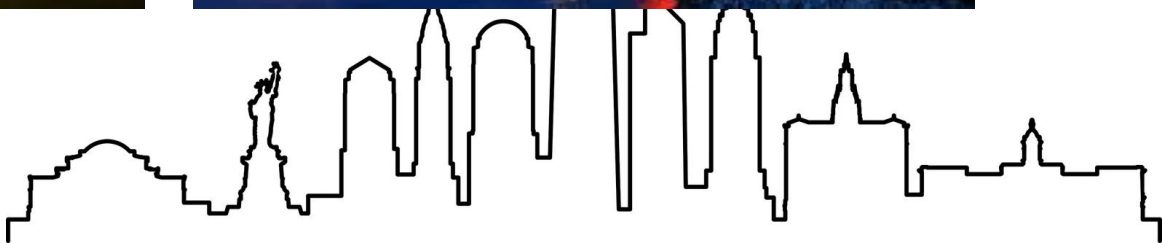
Feature Detection

Distinguishes key features in an image

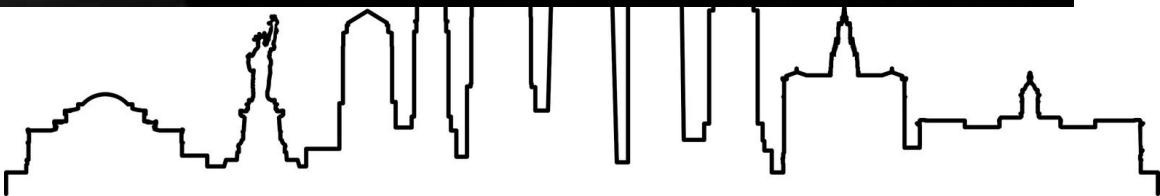
(ie. edges, lines, bends)



Feature Matching



Feature Matching (cont.)



Model Demonstration

[Streamlit](#)



Future Developments

- More landmarks and cities
- Seamless app:
 - Interactive map
 - Incorporated history and recommendations



Questions?



Sources

<https://www.worldatlas.com/cities/the-world-s-10-most-visited-cities.html>

<https://www.osc.state.ny.us/reports/osdc/tourism-industry-new-york-city>

