

# GEN AI -Project\_Unit1

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## Travel Destination Extractor (NER-based)

The goal of this project is to parse unstructured travel blog text and extract all the travel destinations mentioned in it which can be cities, countries, and other locations. This helps retrieve travel destinations from long narrative blogs .

### Technique Used:

Named Entity Recognition (NER) using Hugging Face pipelines

## Abstract

With the rapid growth of online travel blogs and digital travel content, manually identifying destinations from large text documents becomes inefficient. This project presents a simple yet effective AI-powered Travel Destination Extractor using Natural Language Processing techniques. By applying a pretrained Named Entity Recognition (NER) model from Hugging Face, the system automatically identifies and extracts locations mentioned in a travel blog. The project demonstrates how unstructured text can be transformed into meaningful, structured insights using Unit-1 NLP concepts without any model fine-tuning.

## Understanding

From Unit 1, I learned how **Hugging Face pipelines** simplify the use of pretrained transformer models for common NLP tasks. In particular, **Named Entity Recognition (NER)** allows models to identify real-world entities such as people, organizations, and locations directly from text. I also understood how contextual embeddings help models recognize locations even when they appear in different sentence structures.

## What I Built

I built a **Travel Destination Extractor** that takes a travel blog as input and automatically extracts all the locations mentioned in the text. The system uses Hugging Face's pipeline("ner") with an aggregation strategy to group tokens properly. The extracted entities are filtered to include only locations (LOC) and displayed as a clean list of travel destinations.

### Sample Input:

```

▶ travel_blog = """
My journey began in New Delhi, where I boarded a flight to Istanbul.
After spending two days exploring the historic Hagia Sophia and the Grand Bazaar,
I continued my trip to Paris, the city of lights. Walking along the Seine River
and visiting the Eiffel Tower was a dream come true.

From Paris, I took a train to Rome, where ancient history comes alive through
the Colosseum and the Vatican City. I also made a short stop in Florence to admire
the art galleries and architecture before heading north to Switzerland.
The Swiss Alps near Interlaken offered breathtaking views and peaceful landscapes.

Next, my adventure took me to Asia. I relaxed on the beaches of Bali and explored
the temples of Ubud. From Indonesia, I flew to Tokyo, where modern technology blends
seamlessly with traditional culture. A short train ride later, I arrived in Kyoto
to visit ancient shrines and cherry blossom gardens.

The final leg of my journey was in the United States. I spent time in New York,
walking through Central Park and Times Square, before traveling to San Francisco
to see the Golden Gate Bridge. My trip concluded with a brief stop in Dubai, where
the skyline and desert safari left a lasting impression.

"""

```

## Output:

```

... Extracted Travel Destinations:
- Bali
- New York
- Rome
- Indonesia
- Central Park
- United States
- Golden Gate Bridge
- Eiffel Tower
- San Francisco
- Paris
- Switzerland
- Colosseum
- Hagia Sophia
- Grand Bazaar
- Asia
- Ubud
- Istanbul
- New Delhi
- Vatican City
- Tokyo
- Times Square
- Dubai
- Seine River
- Alps
- Kyoto
- Interlaken
- Florence

```

