

National Park Service: Park Pal 🐻 You can ask questions about parks, amenities, events, fees, and more Type 'exit' to end the chat. . How can I help you? Where can I find Zion National : Zion National Park is located at Zion National Park 1 Zion Park Blvd. in Springdale, Utah 84767 What is the description of the **Grand Canyon?** : Here is the description of Grand Canyon National Park: Entirely within Northern Arizona, the park encompasses 278 miles (447 km) of the Colorado River and adjacent uplands. Located on ancestral homeland of 11 present day Tribal Communities, Grand Canyon is one of the most spectacular examples of erosion anywhere in the world-a mile deep canyon unmatched in the incomparable vistas it offers visitors from the north and south rims.



Intermountain

Midwest National Capital

Synthetic Data

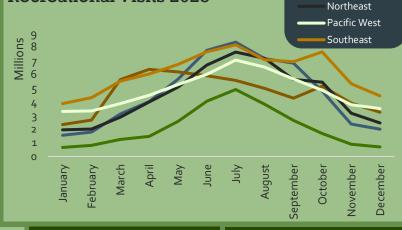
Synthetic queries were developed to represent questions that users may ask in association with five NPS API endpoint.

The team used an 80/20 split to create test & validation data.

Separate queries Queries

were developed for evaluating the models to prevent data leakage.

Recreational Visits 2023





Evaluation methodology

Top 5 National Parks 2023

PROJECT

FINE-TUNE GPT

HOST PARK PAL

aws

COMPUTE WITH LAMBDA

ROADMA

PREPARE SYNTHETIC

DATA 🚄



VISITS (MILLIONS)

Fine Tuned GPT

The NPS API documentation and URL structure did not lend itself to easy interpretation by typical chatbot models. The team explored fine-tuning GPT models to create the parameters for NPS API calls based on a user query.

OPENAI

Fine-tuning improves on few-shot learning by training on many more examples than can fit in the prompt, letting you achieve better results on a wide number of tasks.

SpaCy & NLTK

Studying at ABC

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https://github.com/ nblakkanesser/MAD S_Capstone



National Park Service: Park Pal 🐻 You can ask questions about parks, amenities, events, fees, and more Type 'exit' to end the chat. . How can I help you? Where can I find Zion National : Zion National Park is located at Zion National Park 1 Zion Park Blvd. in Springdale, Utah 84767 What is the description of the **Grand Canyon?** : Here is the description of Grand Canyon National Park: Entirely within Northern Arizona, the park encompasses 278 miles (447 km) of the Colorado River and adjacent uplands. Located on ancestral homeland of 11 present day Tribal Communities, Grand Canyon is one of the most spectacular examples of erosion anywhere in the world-a mile deep canyon unmatched in the incomparable vistas it offers visitors from the north and south rims.

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Midwest National Capital

Northeast

PROJECT ROADMAP



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Model **Evaluation**

Evaluation methodology

Recreational Visits 2023



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0 5 10 15 VISITS (MILLIONS)

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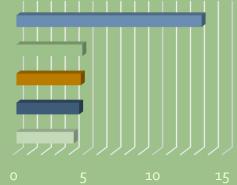
82k Queries

Model **Evaluation**

Evaluation methodology



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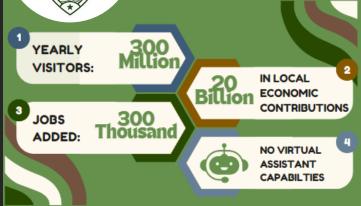
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nblakkanesser/MAD S_Capstone





Chat with Park Pal Today!



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National Capital

Midwest

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Model **Evaluation**

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PREPARE SYNTHETIC

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SpaCy & NLTK

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98

Millions

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Intermountain

Northeast Pacific West

Southeast

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VISITS (MILLIONS)

Model **Evaluation**

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GitHub:

https://github.com/

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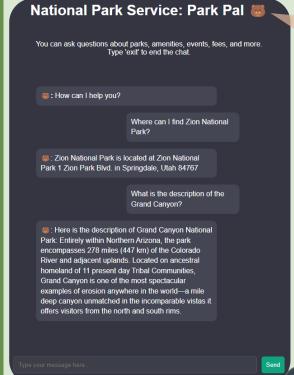
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ROADMAP



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