



Final Project Proposal

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Hike Finder

Build an app that recommends National Park hiking trails based on your mood

Data

Scrape NPS (trail descriptions, duration, location)

Model

Classification to predict the “best match” trail

App

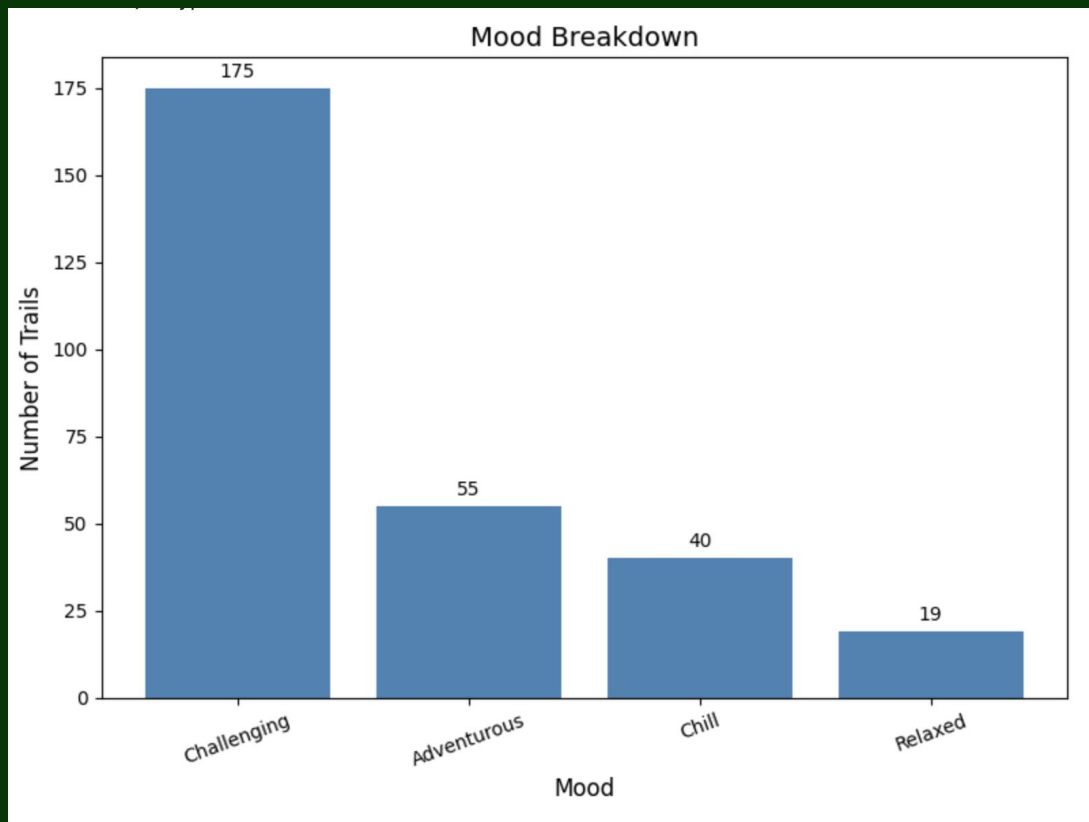
Dropdown feature for mood and park location

Data Details

Example data pull output using
Google Colab Notebook

title		shortDescription	duration	season	activity	parkName	states
Watchman Trail	The Watchman trail is out-and-back. From the r...		1-2 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
West Rim to Scout Lookout	The strenuous West Rim Trail ascends ~1,000 ft...		3-4 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Timber Creek Overlook	Follows a ridge to views of Timber Creek, Kolo...		30-60 Minutes	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Taylor Creek Trail	Kolob Canyons hike. Follows the Middle Fork of...		3-4 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Sand Bench	The Sand Bench Trail travels atop the remains ...		1-4 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Riverside Walk	The Riverside Walk is a relatively flat and pa...		1-2 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Middle Emerald Pools Trail	Middle Emerald Pools Trail is a moderate hike ...		1-2 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Upper Emerald Pools Trail	Upper Emerald Pools Trail is a moderate, 1 mil...		1-2 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Lower Emerald Pool Trail	Lower Emerald Pool trail is a rough, paved tra...		1-2 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Kayenta Trail	The moderate, 2.0 mi (3.2 km) Kayenta Trail fo...		2-3 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Grotto Trail	The trail connects the Zion Lodge to the Grott...		15-45 Minutes	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Pa'rus Trail	Pa'rus is Paiute for "bubbling water." The Pa'...		30-120 Minutes	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Canyon Overlook	Long drop-offs, mostly fenced. Rocky and uneve...		1-2 Hours	Winter, Spring, Summer, Fall	Hiking	Zion National Park	UT
Hike the Deep Creek Waterfalls Loop	See three waterfalls on a loop around the Deep...				Hiking	Great Smoky Mountains National Park	NC,TN
Bear Lake	Bear Lake is seen in winter and spring. This l...			Winter, Spring, Summer, Fall	Hiking	Rocky Mountain National Park	CO
1966 Hiking Challenge	The 1966 Hiking Challenge is comprised of 19 h...		1-5 Hours	Spring, Summer, Fall	Hiking	Indiana Dunes National Park	IN
Williams Hollow Loop Hike	Hiking at Pea Ridge National Military Park is ...		45-90 Minutes	Winter, Spring, Summer, Fall	Hiking	Pea Ridge National Military Park	AR
Hike Porters Creek Trail	Porters Creek is a peaceful trail that is fill...		1-3 Hours		Hiking	Great Smoky Mountains National Park	NC,TN
Lewis River Channel/Deershead Trail	Hike through forest to the crystal-clear water...		5-8 Hours	Summer, Fall	Hiking	Yellowstone National Park	ID,MT,WY

Exploratory Data Analysis



Mood	Duration
Relaxed	≤ 45 min
Chill	46–120 min (≤ 2 hrs)
Adventurous	121–240 min (2–5 hrs)
Challenging	> 240 min

App Details



How It Works

1. Predefined mood categories:
 - Relaxed, chill, adventurous, challenging
2. Matched to existing trail metadata
 - Duration, location, etc.
3. Implemented rule-based mapping:
 - “If mood = relaxed → easy trail”

A scenic landscape featuring a calm lake reflecting the surrounding forest and distant mountains. In the foreground, a wooden bench sits on a grassy bank. The scene is framed by large green shapes on the left and top right, which contain the text 'You' and 'Thank' respectively.

Thank

You