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AOS Project Proposal

I plan to provide an accurate projection of the expected number of wildfires in a given day and location in California. The goal would be to provide CAL FIRE with a better estimate of the number of firefighters needed and where they should be placed in order to minimize acres burned. The model would be based off of fire location, size, date, and possibly fire department locations. The datasets I will be using are the CAL FIRE incident archive from multiple previous years, located at fire.ca.gov. Below is an example of extracting date information about all previous recorded fires, and plotting the total number of fires against the month it started in.

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

✓ 1.0s

```
df = pd.read_csv("mapdataall.csv")
months = df["incident_date_created"].str.slice(5,7)
days = df["incident_date_created"].str.slice(8,10)
counts = months.value_counts()
#print(counts)
##code from chatgpt
# Use zip to pair elements from both lists
zipped_lists = list(zip(counts.index, counts))

# Sort the zipped list based on the values from list1
sorted_zipped_lists = sorted(zipped_lists, key=lambda x: x[0])

# Extract the sorted elements back into separate lists
indices, sorted_counts = zip(*sorted_zipped_lists)
##\code from chatgpt
plt.plot(indices, sorted_counts)
```

✓ 0.1s

```
[<matplotlib.lines.Line2D at 0x189da02bcd0>]
```