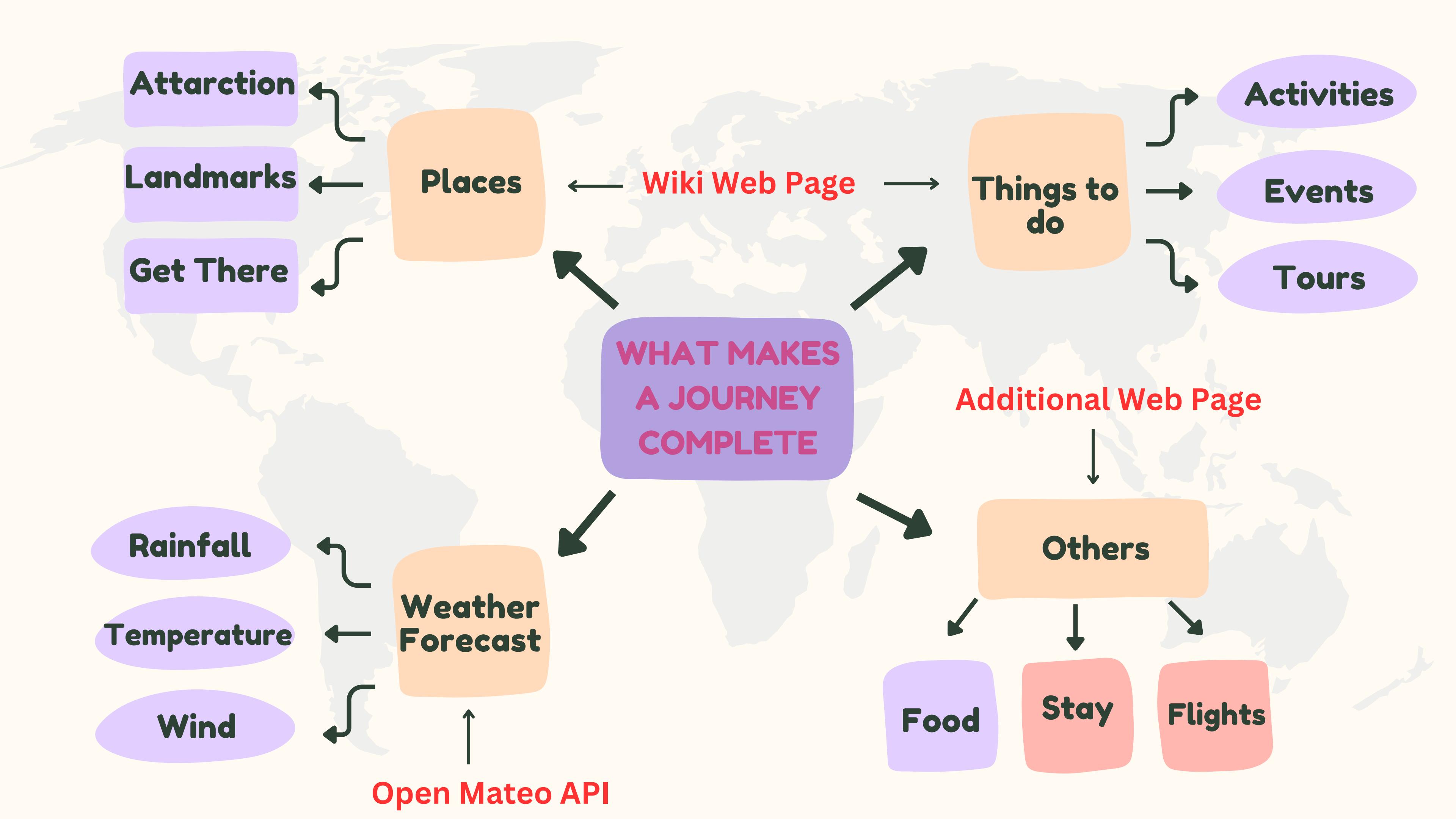




# Journey Genie

**Smart Travel &  
Weather Assistant**

Presented by  
**Abhay, Shivani, Sravya**



# PROJECT OVERVIEW

**Given a destination and dates of travel, Journey Genie provides the following.**

**It combines Web Scraping & API Retrieval to generate an automated travel guide.**

1

**Travel Data**

→ Scrapes travel-related info from Wiki Travel

2

**Weather Forecast**

→ Uses Open Meteo API for real-time weather forecasts

3

**Food Recommendations**

→ Uses OpenStreetMap to find restaurant



**Wiki Web Page**

**Open Meteo API**

**Additional Web Page**



# IMPLEMENTATION

## Wiki Web Page

### Places

- Web Scraping
  - Scrape wiki travel website, including places, things to do section
  - Scrape html font styles
  - 📌 Library Used: BeautifulSoup

## Wiki Web Page

### Images

- Web Scraping
  - Fetch images to visualize the destination.
  - 📌 Library Used: BeautifulSoup

## Open Mateo API

### Weather

#### API Forecast

- Provide a weather forecast for the entire trip duration.
- Fetch temperature, rainfall, wind speed for a specific date range.
- 📌 Library Used: requests

## Additional Web Page

### Food

#### OpenStreetMap

- Extract restaurant names, cuisine, and location
- Convert data into a structured DataFrame (DF) for presenting
- 📌 Library Used: requests

```
see_headers = soup.find_all(["h2", "h3"], string=lambda text: text and "See" in text)

# Track the next major section to know when to stop
for sibling in see_parent.find_next_siblings():
    # Stop at the next major section (h2)
    if sibling.name == "h2":
        break

    # Capture subheadings (h3, h4)
    if sibling.name in ["h3", "h4"]:
        # Reset line count for new subheading
        line_count = 0

        # Extract subheading text and remove [edit]
        subheading_text = sibling.get_text(strip=True)

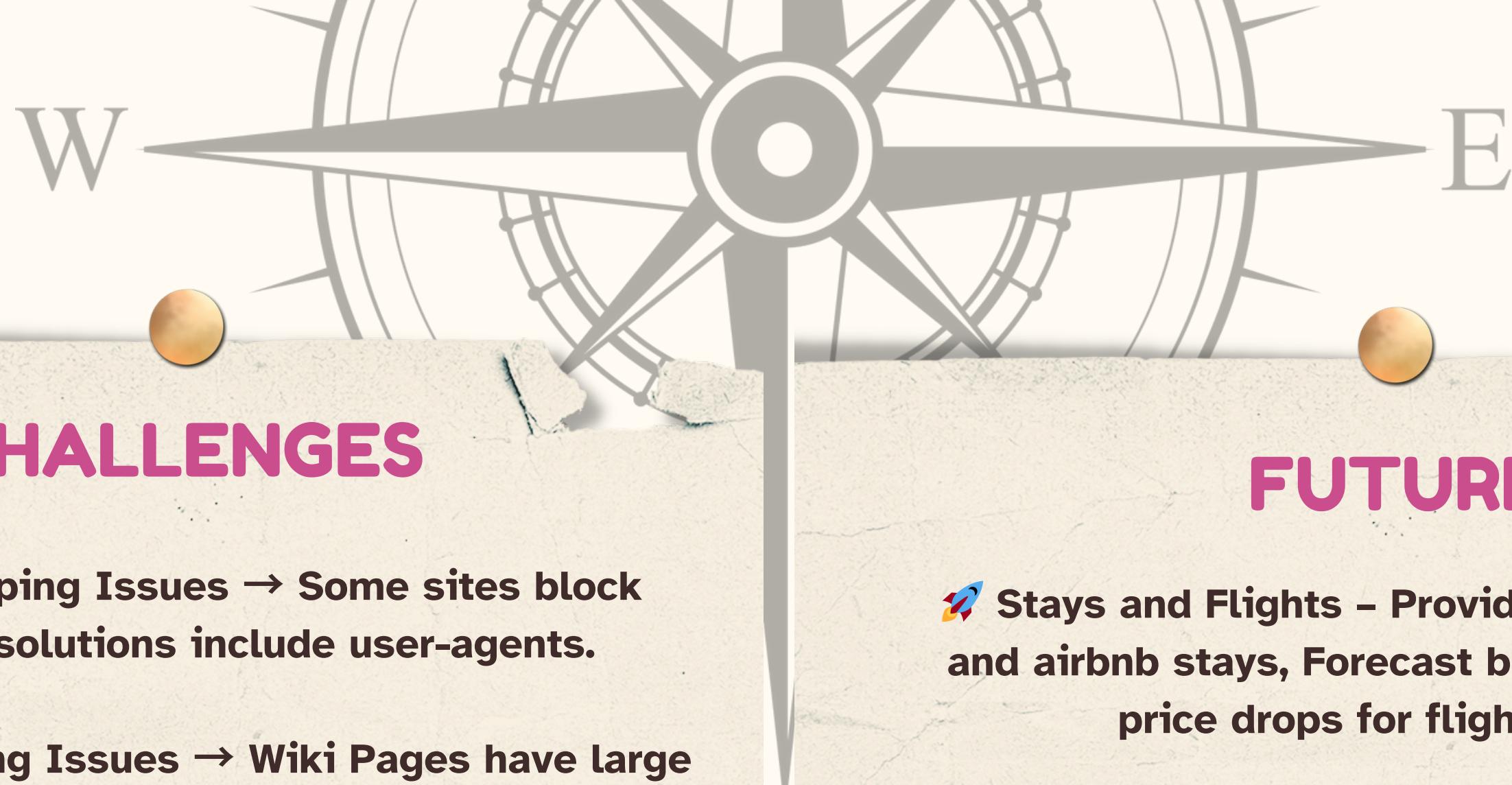
    . . .

images = soup.find_all('img')
```

# RESULTS

## PRINTED FINAL RESULTS (TEXT, IMAGES, TABLES) USING LIBRARY - IPYTHON.DISPLAY

- Must-Visit Places – Successfully scraped travel highlights from Wiki Travel
- Real-Time Weather Forecast – Fetched average temperature, rain, and wind conditions from Open-Meteo API
- Top Restaurant Recommendations – Retrieved restaurant names, cuisines, and locations using OpenStreetMap API



## CHALLENGES

- **Web Scraping Issues → Some sites block scraping; solutions include user-agents.**
- **Web Scraping Issues → Wiki Pages have large amount of data; solutions include limiting the content**
- **Web Scraping Issues → Some websites follow anti scraping measures**
- **API Restrictions → Free APIs have limited access; solutions include caching the data**

## FUTURE

- **🚀 Stays and Flights – Provide top rated hotels and airbnb stays, Forecast best travel dates & price drops for flights/hotels**
- **🚀 Chatbot & Voice Assistant Integration – Allow users to chat with Journey Genie and ask real-time travel questions**
- **🚀 Budget-Based Travel Plans – Provide travel recommendations based on budget constraints.**

# DEMO

← → ⌂ colab.research.google.com/drive/1Y8vt8WBKqICksBUS-K2eQk25Rtfn0E2P?authuser=2#scrollTo=i9TOmy\_vSHop

DDR\_Project2.ipynb

File Edit View Insert Runtime Tools Help

Commands + Code + Text

RAM Disk

Share

4. Putting Everything Together

```
# input values
# Please change these values as per your requirement
# Note: The dates can only be future dates, starting today
location = "San_Francisco"
days = ["2025-03-08", "2025-03-09", "2025-03-10"]

[24]: text1 = "Welcome to Journey Genie!"
text2 = "Your personalized recommendations for location: " + location

# Display the first text as an h1 and the second text as an italicized h4
display(HTML(f"<h1 style='color: Purple; font-weight: bold;'>{text1}</h1>"))
display(HTML(f"<h4 style='color: orange; font-style: italic;'>{text2}</h4>"))

# Attractions - See
get_attractions(location, terminal_width)

# Images
print("\n")
text = "Images"
display(HTML(f"<h2 style='color: Navy; font-weight: bold;'>{text}</h2>"))
image_paths = fetch_and_display_images(location, num_images=2)
display_downloaded_images(image_paths)

# Activities - Do
print("\n")
get_activities(location)

# Weather
averages = calculate_averages(location, days)
print("\n")
text = "Weather"
display(HTML(f"<h2 style='color: Navy; font-weight: bold;'>{text}</h2>"))
print_weather_forecast(averages, location)

# Restaurants
l = ".join(location.split('_'))
df = get_osm_restaurants(l)
print("\n")
text = "Restaurants"
display(HTML(f"<h2 style='color: Navy; font-weight: bold;'>{text}</h2>"))
print_top_restaurants(df)
```

# APPENDIX

## Welcome to Journey Genie! 🌎🌟

Your personalized recommendations for location: San\_Francisco

### Places to See

#### Cards & Passes

Two passes are available which offer discounts to many interesting attractions:

- Go San Francisco Card[57]. An all-inclusive pass

### Things to Do

#### Events

There is an incredible array of events going on in San Francisco — Listed here are just some of the really big events going on:

### Images



### Weather

🌐 Weather forecast for San\_Francisco: 🌐

Date	Avg Temp	Wind Speed	Precipitation
2025-03-08	12.85°C	9.40 km/h	No Rain ☀️
2025-03-09	13.70°C	18.90 km/h	No Rain ☀️
2025-03-10	10.40°C	20.60 km/h	2.10 mm 🌧️

### Restaurants

📍 Restaurant Name	🍕 Cuisine	🏙️ City
Mel's Drive-in	diner	San Francisco
Mezze and Mooore	lebanese	San Francisco
John's Grill Live Jazz	steak;seafood	San Francisco
Frankie's Java House	N/A	San Francisco
Caffe Centro	N/A	San Francisco
South Park Cafe	N/A	San Francisco
Little Star Pizza	pizza	San Francisco
Dupont Thai	thai	San Francisco
Bocce Cafe	italian	San Francisco
Maykadeh Persian Restaurant	persian	San Francisco

**THANK YOU**