

# Getting Data from API's Using Python

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# Who we are

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**Coding consultations @ GW LAI:**

<https://calendly.com/gwul-coding>

# Google Colab

<https://colab.research.google.com>

- Use code cells to enter & execute Python commands.
- Press shift+enter (or shift+return) to run a code cell.
- Use text cells to document your code.

# Workshop goals

1. Understand the REST framework for data retrieval.
2. Construct API queries in Python using the `requests` library.
3. Write functions and loops to handle multiple API responses.
4. Use the `pandas` library to analyze & visualize results.

# API's & REST

- An API is a **programming** interface.
- API's facilitate working with data **in bulk**.
- A **REST** API uses HTTP protocols to transfer data over the Internet.
- **JSON** is a common format for API data.

# API tips

1. Review the API documentation to understand how to construct your queries.
2. Make sure you observe any rate limits.
3. Authentication via an “API key” or other means may be required.
4. Make sure you understand any limitations on how you can use the provided data.

# Additional resources

- For examples of working with API's that require authentication, see [last year's API workshop](#).
- Not all data on the web are available via API. In such cases, [web scraping](#) may be a useful option.