<https://app.dataquest.io/c/18/m/52/working-with-apis/1/whats-an-api>

Using APIs to access web data is a common skill in the data science and analysis world. Working in this increasingly popular and high-earning field requires querying and retrieving data — and often integrating it into your own apps.

An API is a collection of tools that allows different applications to interact. Some of the biggest names on the web (like Reddit, Spotify, Twitter, and Facebook) offer free APIs to make the valuable data on their servers available. Other companies and services charge for these APIs. Learning to work with APIs will prepare you to work in data retrieval and analysis to generate insights and help make valuable predictions.

Here are a few takeaways you can expect from this lesson:

* The advantages of APIs
* How to create and process API requests
* How the JSON data format works

You'll need to be comfortable wit hthe basics of programming in Python to get the most out of the guided project in this lesson. We'll show you firsthand how to work with APIs by retrieving data from the International Space Station.

Let's get started!

Organizations host their APIs on **web servers**. When you type www.google.com in your browser's address bar, your computer is actually asking the www.google.com server for a web page; the server returns the page to your browser.

APIs work much the same way, except instead of your web browser asking for a web page, your program asks for data. The API usually returns this data in [JavaScript Object Notation](http://json.org/) (JSON) format. We'll discuss JSON more later on in this lesson.

We make an API request to the web server with the data we want. The server then replies and sends it to us. In Python, we do this using the [requests library](https://requests.readthedocs.io/).



















