

Lecture 6

Intro to REST APIs

DS3500
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Practical Exam 1 Coming Up

Instructions on Canvas: https://northeastern.instructure.com/courses/240374/pages/practical-exam-1-instructions?module_item_id=13325346

Test starter file on the public repo under **test1**

If you have DAS accommodations, please reach out to Rush via email



What is REST?

stateless
request / response

REpresentational **S**tate **T**ransfer

Architecture for web APIs

Relies on HTTP methods for operations

URLs represent resources

URL
URI



HTTP Methods and Status Codes

Requests

GET

POST → add data point

PUT/PATCH update

DELETE

response

20X 200 - ok ✓
201 - accepted
40X 403 ✗
404
50X server error



Using REST APIs

`https://api.github.com/users?id=3112&...`

Headers

Parameters (Query and Path)

Authentication Keys

Python's **requests** module

↳ wrappers

Diagram illustrating URL components:

Path parameters: `/.../.../...`

Query parameters: `?param=value¶=value`

Handwritten labels: *path parameters*, *query parameters*, *value*, *para*

Our API Today — OpenAQ

<https://docs.openaq.org/>

Air Quality Data

Requires an API key to use

Has a wrapper library for Python,
but we will use it via **requests**



[OpenAQ] What is the ID for the US?



100

0

95

0

155

0

1

0

None of the above

0

How would you go about finding Boston's air quality through the API? Post an idea or a step to help others get there.



Nobody has responded yet.

Hang tight! Responses are coming in.