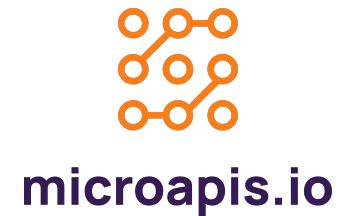


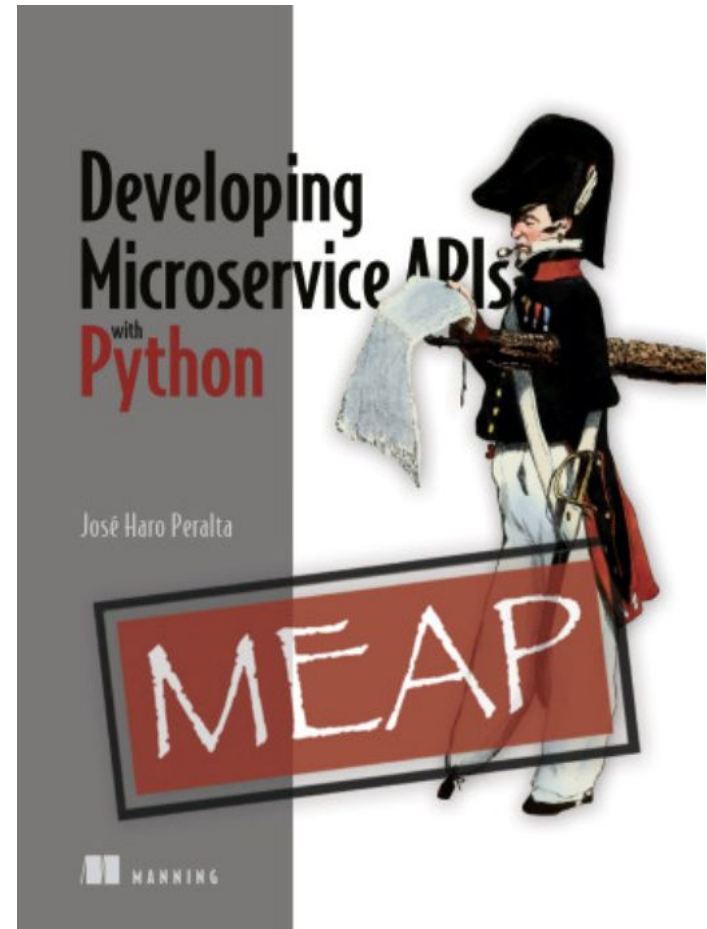
Delivering successful API integrations with Python

- Jose Haro Peralta
- Full stack consultant / Founder of microapis.io
- Conf42 Python 2021



\$ whoami

- I'm Jose
- Independent contractor | London
- Full stack developer
- Microservices and APIs



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microapis.io

One-click API mock servers

Your mock API is available at this URL: <https://www.microapis.io/apis/mock/6063967a6271a0390ca6ed5e>

This URL is valid for an hour

Try this endpoint: <https://www.microapis.io/apis/mock/6063967a6271a0390ca6ed5e/todo>

Happy testing!

Mock this API

API editor | [Fetch API from URL](#)

JSON YAML

```
openapi: 3.0.3
info:
  title: TODO API
  description: API that allows you to manage a to-do list
  version: 1.0.0
paths:
  "/todo/":
    get:
      parameters:
        - in: query
          name: filter
          required: false
          schema:
            type: boolean
        - in: query
          name: limit
          required: false
          schema:
            type: number
      summary: Returns a list of to-do items
      responses:
        '200':
          description: A JSON array of tasks
          content:
            application/json:
              schema:
                type: array
```

TODO API 1.0.0 OAS3

API that allows you to manage a to-do list

Servers

<https://www.microapis.io/apis/mock/6063967a6271a0390ca6ed5e>

default

GET /todo/ Returns a list of to-do items

POST /todo/ Creates an task

GET /todo/{item_id} Returns the details of a task

PUT /todo/{item_id} Updates an existing task

DELETE /todo/{item_id} Deletes an existing task

Connect with Jose

- Twitter: @JoseHaroPeralta
- GitHub: @abunuwas
- Medium: @joseharoperalta / @python-geek
- LinkedIn: <https://www.linkedin.com/in/jose-haro-peralta/>

This presentation covers

- Complexity of API integrations
- What is documentation-driven development and why it matters?
- How to you can adopt documentation-driven development?
 - REST API (OpenAPI)
 - FastAPI
 - Dredd and mock servers
- Continuous Integration and deployment to Heroku
- Code for this presentation:
<https://github.com/abunuwas/conf42-python-2021>

API integrations are tricky

API client



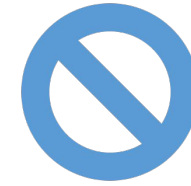
API server

12/12/2020 vs 12-12-2020

How API integrations fail



Lack of
documentation



Bad documentation



Lack of design
stage

What is API documentation?



REST -> OpenAPI



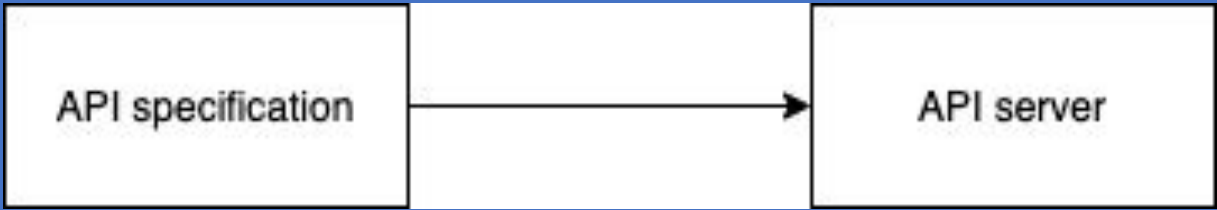
GraphQL -> Schema Definition Language



gRPC -> Protobuf

What is documentation-driven development?

- Also known as design-first, API-first or contract-first approach
- Design and produce the API specification first
- Build your server and your API client (if you have one) against the specification
- Use the specification to validate your implementation



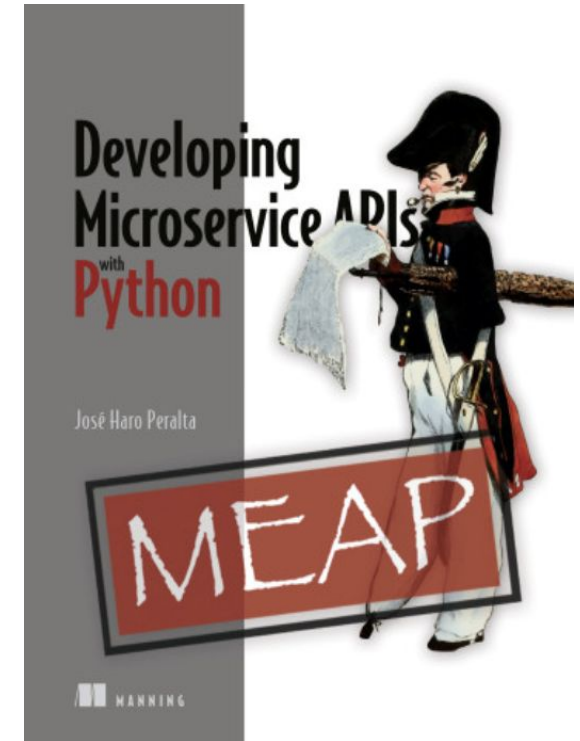
```
graph LR; A[API specification] --> B[API server]
```

API specification

API server

Thanks for listening!

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- Medium: @joseharoperalta / @python-geek
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