

API Copilot 助力开发高质量 Python API 应用

韩骏 - VS Code 中文社区创始人



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- 《Visual Studio Code 权威指南》作者
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- 955.WLB repo 创建者
- 20 多款 VS Code 插件 (Code Runner 7000 万下载量)
- 内推 100 多人拿到微软 offer
- QCon、PyCon、JSConf、.NET Conf、Microsoft Tech Summit、Google Developer Group、COSCon 等大会讲师
- 全网粉丝 20w+



➤ API First

➤ Code First

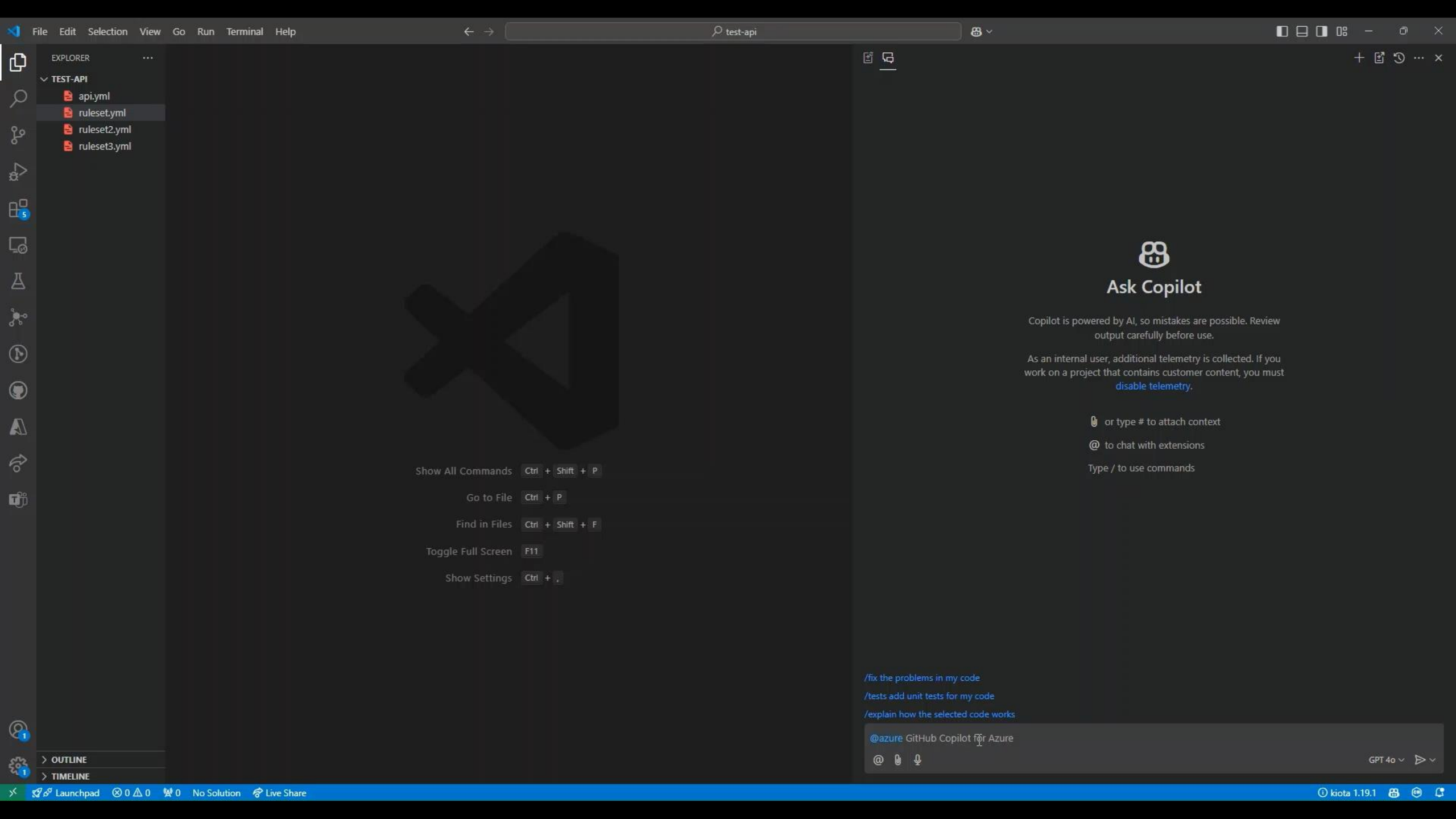
Why – API First 的痛点

- 从零开始编写 OpenAPI spec 并非易事!
- 编写符合公司/组织 API Rule 的 OpenAPI spec, 更难!

What

从自然语言生成 OpenAPI spec!

	用户已有 OpenAPI spec	用户已有 Spectral API Rule
场景#1	No	No
场景#2	No	Yes
场景#3	Yes	No
场景#4	Yes	Yes



EXPLORER

TEST-API

api.yml
ruleset.yml
ruleset2.yml
ruleset3.yml



Show All Commands **Ctrl** + **Shift** + **P**

Go to File **Ctrl** + **P**

Find in Files **Ctrl** + **Shift** + **F**

Toggle Full Screen **F11**

Show Settings **Ctrl** + **,**



Ask Copilot

Copilot is powered by AI, so mistakes are possible. Review output carefully before use.

As an internal user, additional telemetry is collected. If you work on a project that contains customer content, you must [disable telemetry](#).

or type # to attach context

@ to chat with extensions

Type / to use commands

/fix the problems in my code

/tests add unit tests for my code

/explain how the selected code works

@azure GitHub Copilot for Azure

@

GPT 4o ▾ > ▾

OUTLINE

TIMELINE

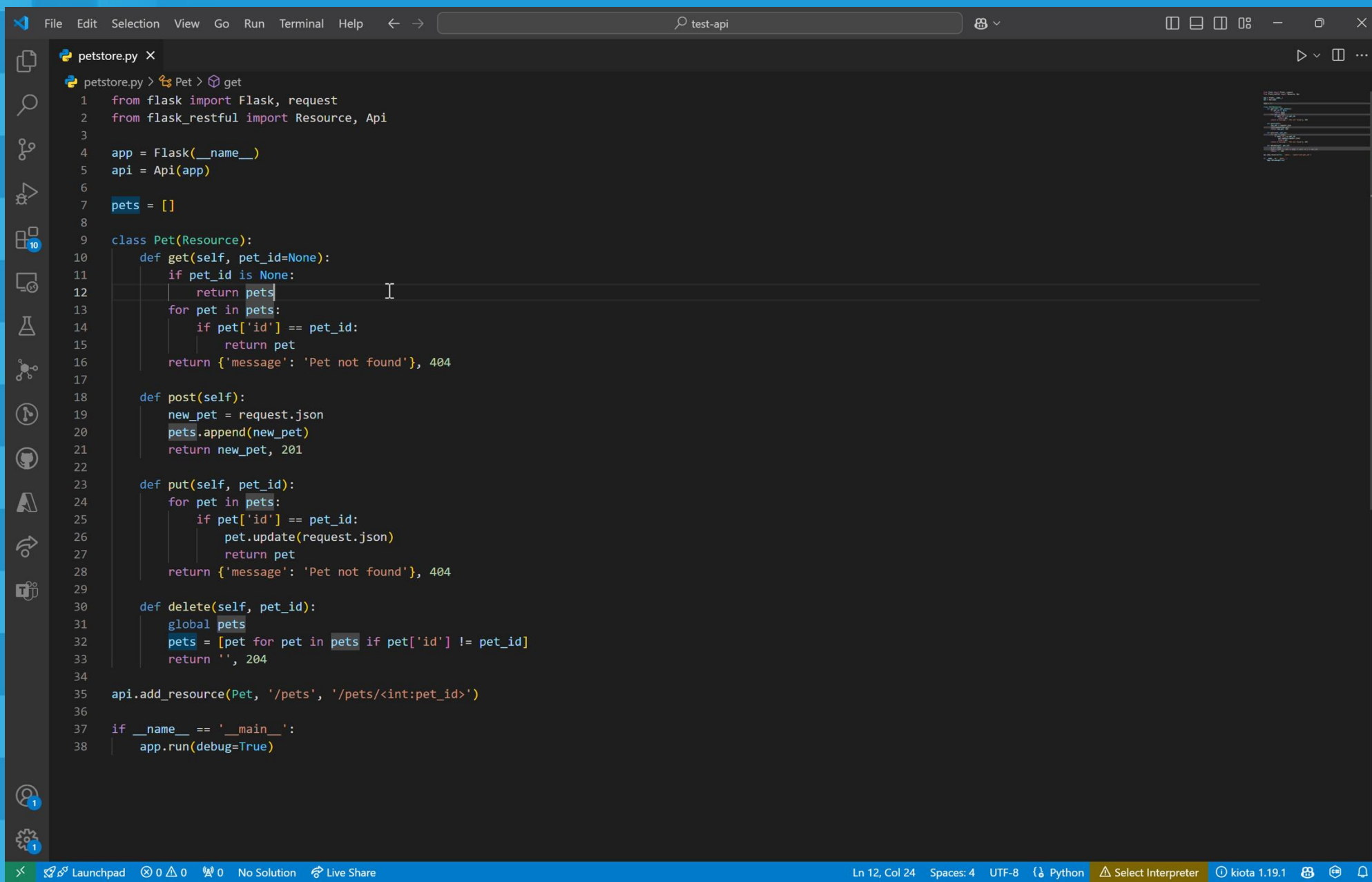
How

方案	生成的效果	LLM 调用次数	支持的 API Rule
Prompt Engineering + 原始的 Rule	Bad	1	单个 Rule
Prompt Engineering + Rule Parser	Good	1	单个 Rule + 默认 Rule
Tool/Function Calling (Lint Tool)	Good+	多次	多个 Rules



One More Thing!

Code First – 已有的 Python API 应用



The screenshot shows a code editor with a Python file named `petstore.py`. The code implements a REST API for a pet store using Flask and Flask-RESTful. The API includes endpoints for getting, posting, putting, and deleting pets. The code is as follows:

```
1 from flask import Flask, request
2 from flask_restful import Resource, Api
3
4 app = Flask(__name__)
5 api = Api(app)
6
7 pets = []
8
9 class Pet(Resource):
10     def get(self, pet_id=None):
11         if pet_id is None:
12             return pets
13         for pet in pets:
14             if pet['id'] == pet_id:
15                 return pet
16         return {'message': 'Pet not found'}, 404
17
18     def post(self):
19         new_pet = request.json
20         pets.append(new_pet)
21         return new_pet, 201
22
23     def put(self, pet_id):
24         for pet in pets:
25             if pet['id'] == pet_id:
26                 pet.update(request.json)
27                 return pet
28         return {'message': 'Pet not found'}, 404
29
30     def delete(self, pet_id):
31         global pets
32         pets = [pet for pet in pets if pet['id'] != pet_id]
33         return '', 204
34
35 api.add_resource(Pet, '/pets', '/pets/<int:pet_id>')
36
37 if __name__ == '__main__':
38     app.run(debug=True)
```

The editor interface includes a sidebar with icons for file explorer, search, and other tools. The bottom status bar shows the current line and column (Ln 12, Col 24), the number of spaces (4), the encoding (UTF-8), the language (Python), and the selected interpreter (kiota 1.19.1).

Try It Now!

Azure API Center extension for VS Code

- <https://aka.ms/apic/copilot>
- <https://marketplace.visualstudio.com/items?itemName=apidev.azure-api-center>
- <https://github.com/microsoft/vscode-azureapicenter>



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