



# Making Better Hacks, Faster *with GitHub Copilot*



**GitHub Copilot**

Welcome @MLH, I'm your Copilot and I'm here to help you get things done faster.

I'm powered by AI, so surprises and mistakes are possible. Make sure to verify any generated code or suggestions.



**MLH**

What should we talk about in a presentation about getting started with GitHub Copilot at hackathons?



**GitHub Copilot**

As an AI programming assistant, I can provide an outline for a presentation about GitHub Copilot:

## **1. What is GitHub Copilot?**

Why would you use it?

## **2. Setting up GitHub Copilot.**

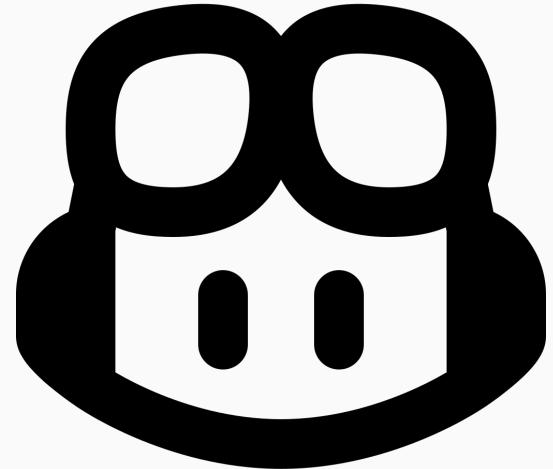
Getting started using Visual Studio Code & the GitHub Copilot extension.

## **3. Using GitHub Copilot.**

An interactive tutorial using some of the features of GitHub Copilot.

# What is GitHub Copilot?

GitHub Copilot is an AI pair programmer, that can help you write, debug, and understand code.



Create a new button component ➔

Accept

Discard

/fix myVar is undefined ➔

Accept

Discard

/explain ➔

Accept

Discard

# Why use GitHub Copilot?

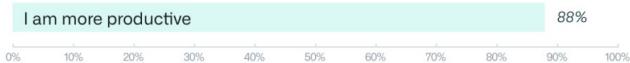


55%

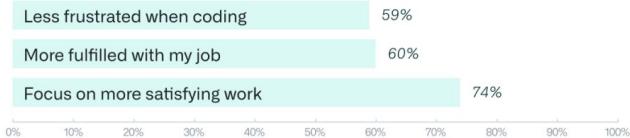
Faster coding

## When using GitHub Copilot...

### Perceived Productivity



### Satisfaction and Well-being\*



### Efficiency and Flow\*

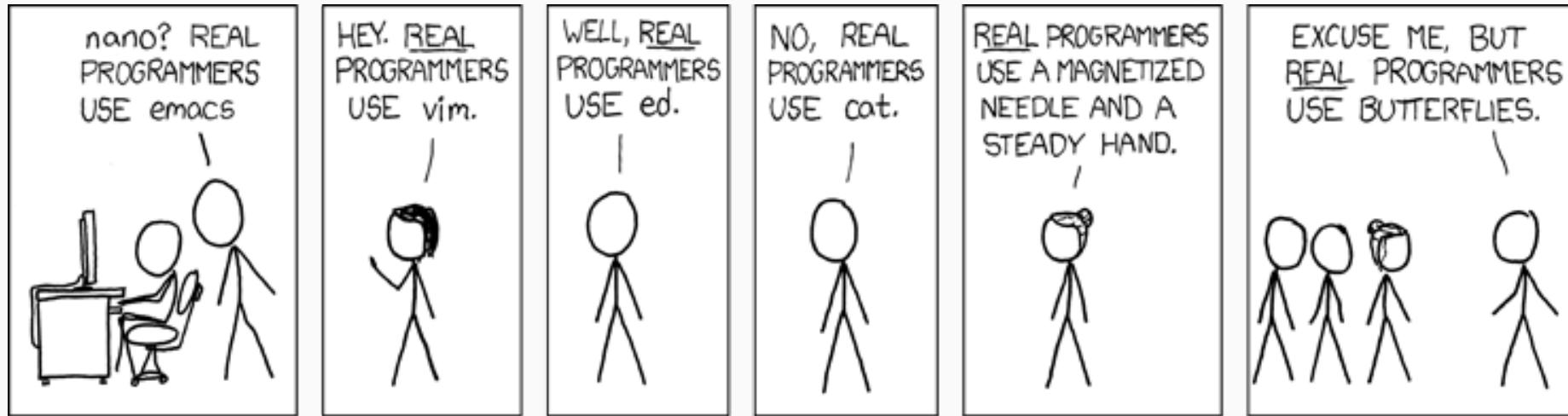


24 frustrating hours just turned into **37 hours** in flow.

# Setting up GitHub Copilot

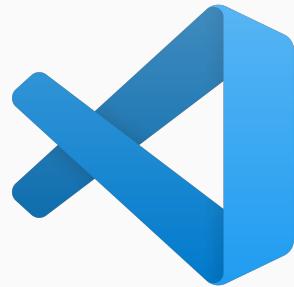
# GitHub Copilot lives where you write code.

What text editor is best?

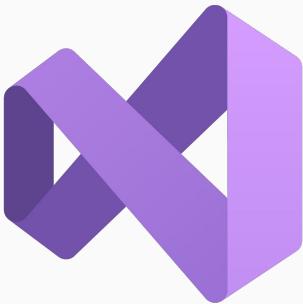


*Put the knives away.*

# GitHub Copilot lives where you write code.



Visual Studio Code



Visual Studio



Vim



Neovim



JetBrains IDEs

Also on your command line through **gh** cli...

# *Let's get started with Visual Studio Code*



**Free Download**

for your system



[code.visualstudio.com](https://code.visualstudio.com)



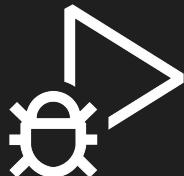
## **Intellisense**

Smart completions from  
your code.



## **Built-in Git**

Pull, commit, and push all  
without leaving your editor.



## **Run & Debug**

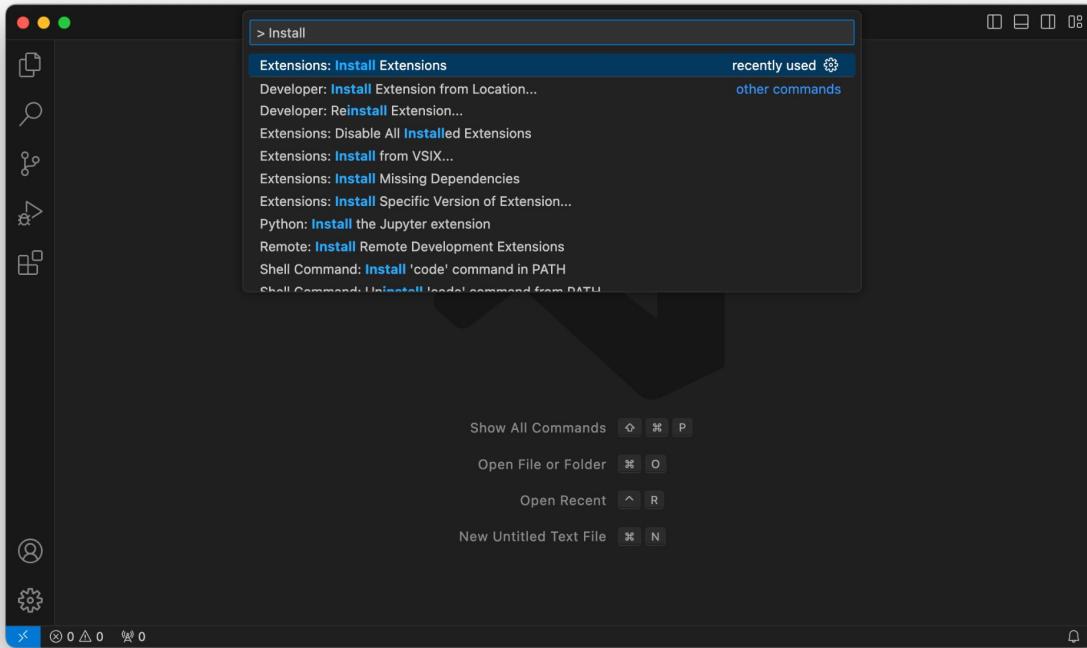
Run your code right from the  
IDE.



## **Extensions**

Add features to make the  
editor match your needs.

# Install the Copilot Extension

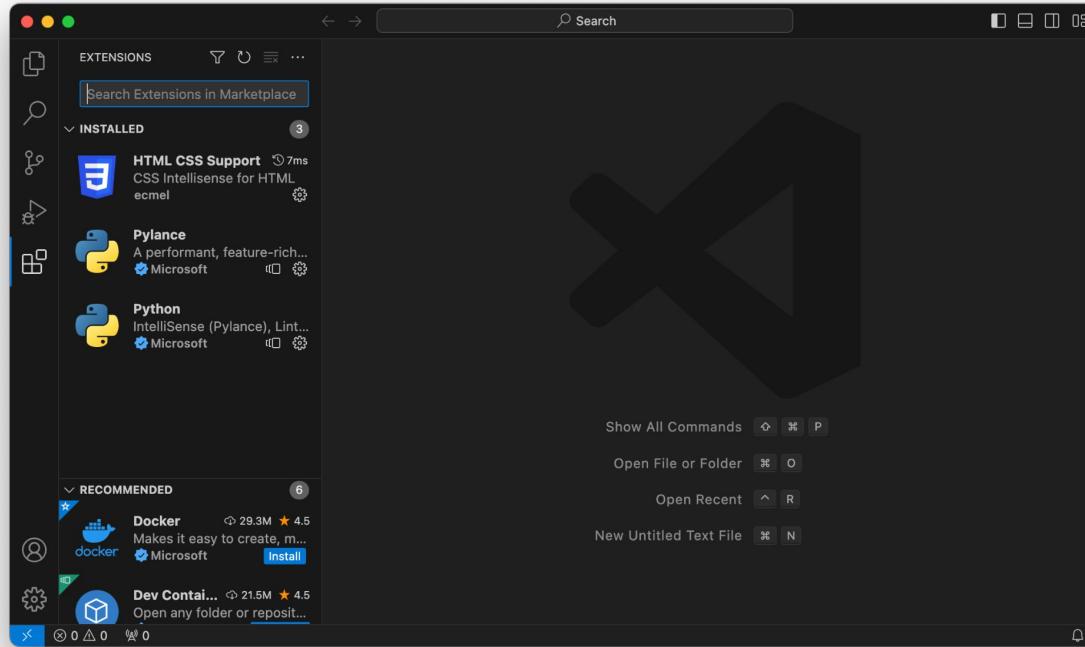


**Ctrl-↑-P / ⌘-↑-P**

Opens the Command Palette.

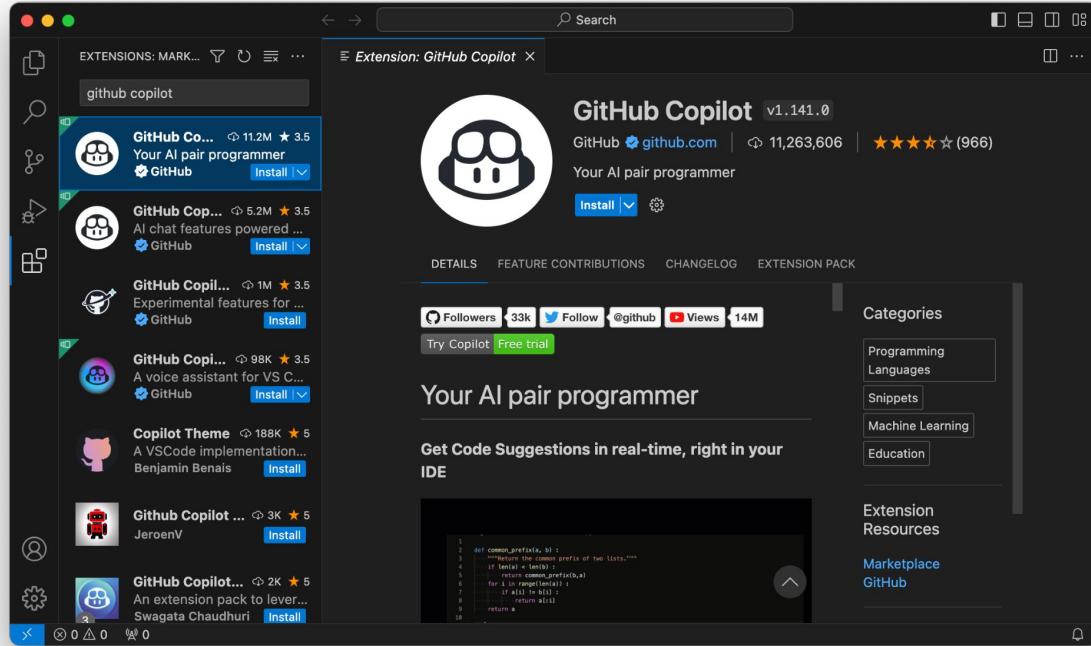
Type **Install Extension**

# Install the Copilot Extension



Search for  
GitHub Copilot

# Install the Copilot Extension



## Select Install

# Activate Copilot

## Copilot Individual

Code completions, Chat, and more for indie developers and freelancers



**Free for Students**

Free for verified students, teachers, and maintainers of popular open source projects.

# GitHub

## Student Developer Pack

# Claim the GitHub Student Developer Pack

Access dozens of professional tools  
for free, while you're a student.

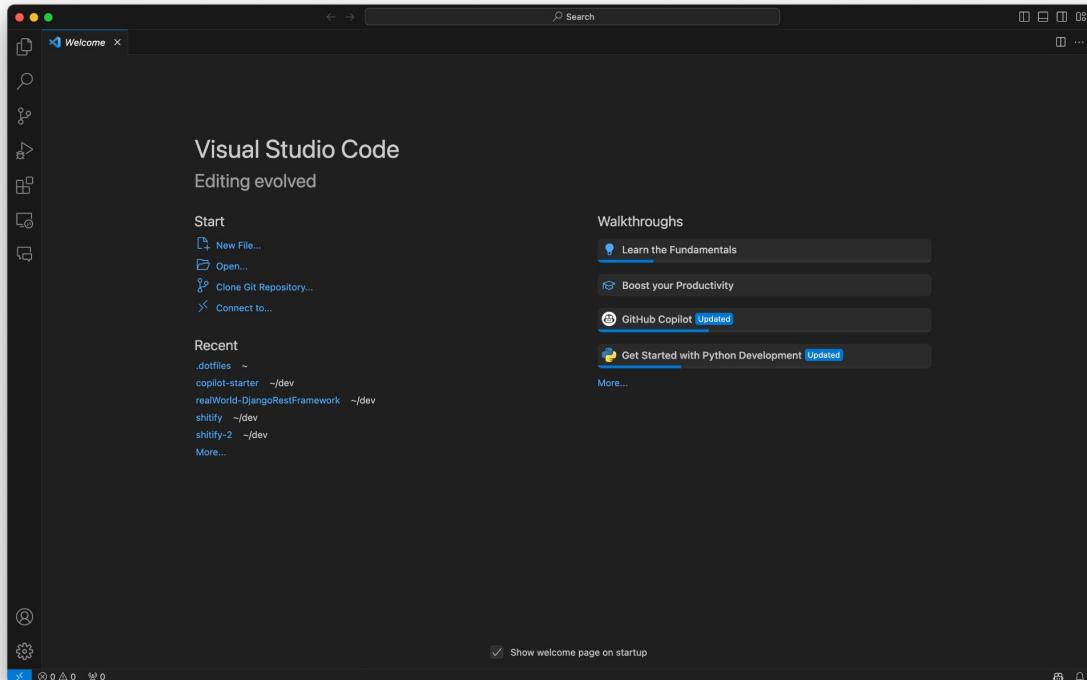
Signup for Student Developer Pack

<https://hackp.ac/pack>



# Using GitHub Copilot

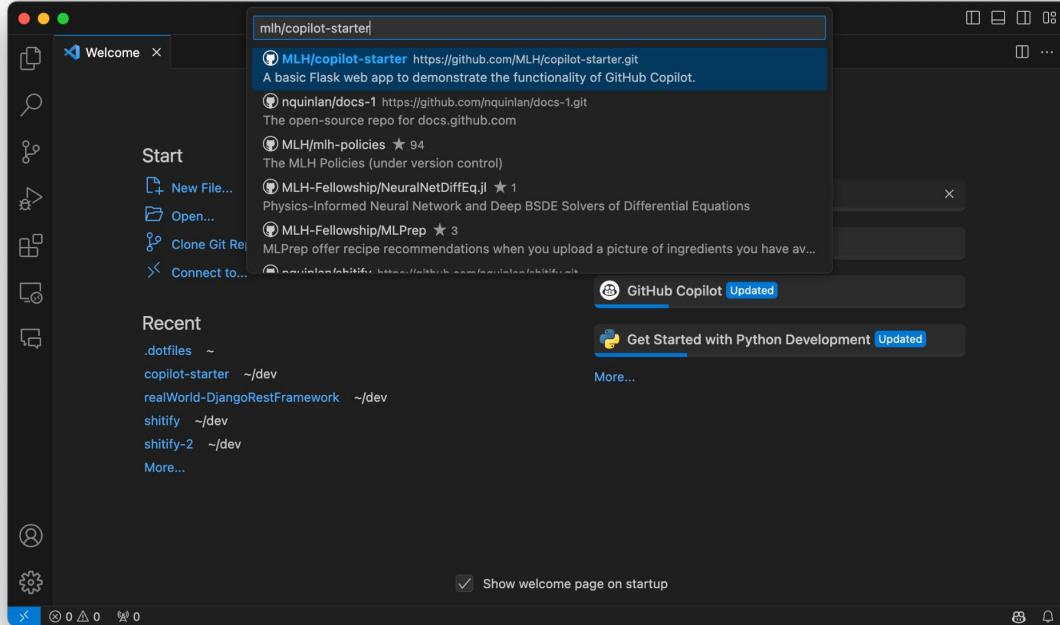
# Starting a Project



Open a New Window

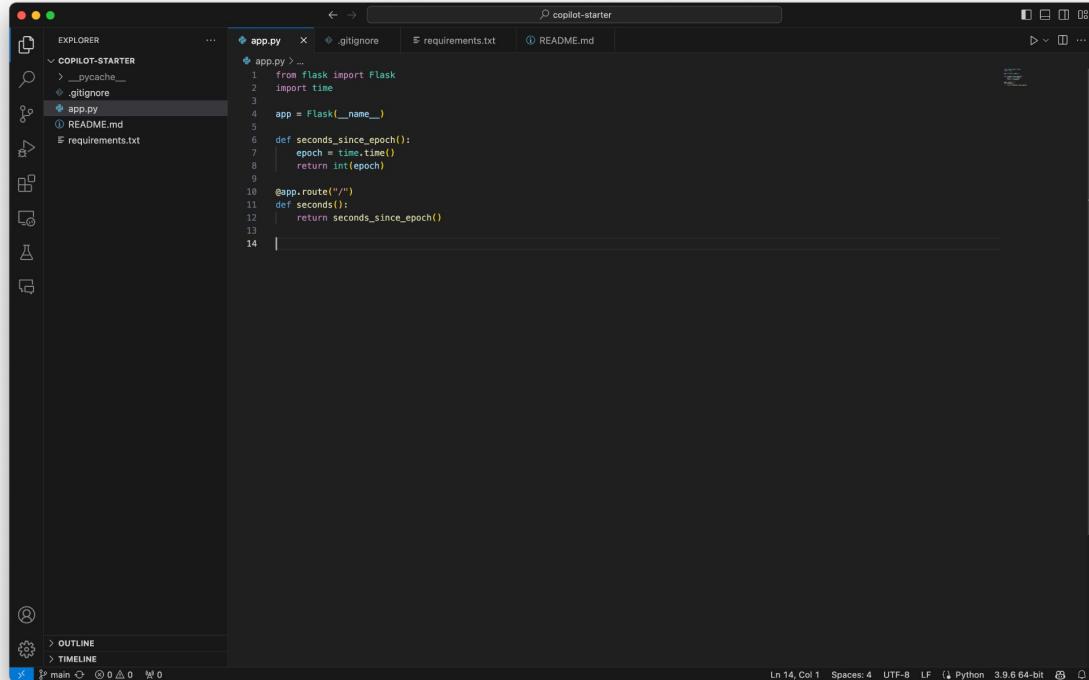
Select Clone Git Repo...

# Clone mlh/copilot-starter



**Clone:**  
**mlh/copilot-starter**

# Open app.py



```
from flask import Flask
import time

app = Flask(__name__)

def seconds_since_epoch():
    epoch = time.time()
    return int(epoch)

@app.route("/")
def seconds():
    return seconds_since_epoch()
```

# Using Copilot to Explain Code

A screenshot of the Visual Studio Code (VS Code) interface. The main editor window shows a Python file named 'app.py' with the following code:

```
from flask import Flask
import time

app = Flask(__name__)

def seconds_since_epoch():
    epoch = time.time()
    return int(epoch)

@app.route("/")
def seconds():
    return str(seconds_since_epoch())

if __name__ == "__main__":
    app.run()
```

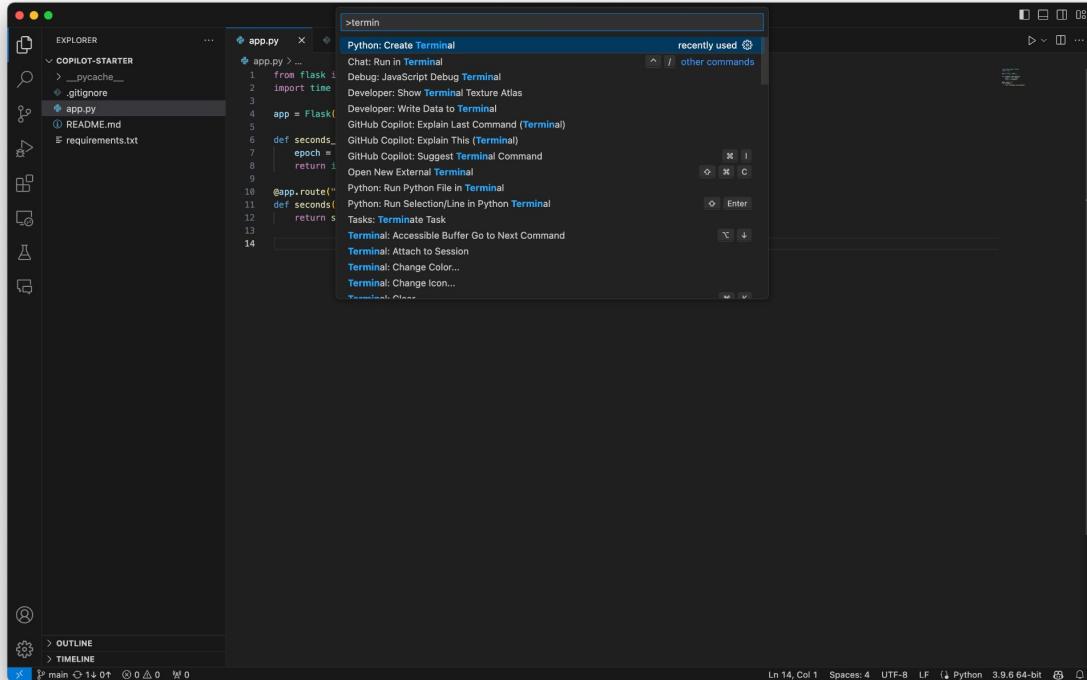
The cursor is positioned on the line 'return int(epoch)'. A tooltip has appeared over the cursor with the text '[explain] Explain how the selected code works'. Below the editor, in the bottom right corner, there is a status bar with the text 'Ln 14, Col 1 Spaces: 4 UTF-8 LF Python 3.9.6 64-bit'.

**Ctrl-I / ⌘-I**

Opens GitHub Copilot

Type **/explain**

# Seeing the Code in Action



**Ctrl-↑-P / ⌘-↑-P**

Opens the Command Palette.

Type **Create Terminal**

# Seeing the Code in Action

The screenshot shows a code editor interface with the following details:

- EXPLORER** panel on the left:

  - Project root: COPilot-STARTER
  - Files: \_\_pycache\_\_, .gitignore, README.md, requirements.txt
  - Code files: app.py, setup.py

- Terminal** tab at the bottom:

  - Running command: pip install -r requirements.txt
  - Output (partial):

```
Collecting Flask==3.0.0 (from -r requirements.txt (line 1))
  Using cached https://files.pythonhosted.org/packages/.../Flask-3.0.0-py3-none-any.whl
Collecting Werkzeug>=3.0.0 (from Flask==3.0.0->r requirements.txt (line 1))
  Using cached werkzeug-3.0.1-py3-none-any.whl.metadata (4.1 kB)
  Using cached werkzeug-3.0.1-py3-none-any.whl (133 kB)
  Downloading Jinja2-3.1.2-py3-none-any.whl (133.1/133.1 kB 6.9 MB/s eta 0:00:00
Collecting itsdangerous<2.1.2 (from Flask==3.0.0->r requirements.txt (line 1))
  Using cached itsdangerous-2.1.1-py3-none-any.whl (15 kB)
Collecting click<8.1.3 (from Flask==3.0.0->r requirements.txt (line 1))
  Using cached click-8.1.1-py3-none-any.whl.metadata (3.0 kB)
  Using cached click-8.1.1-py3-none-any.whl (19 kB)
Collecting Werkzeug<3.0.0 (from Jinja2==3.1.2->r requirements.txt (line 1))
  Using cached blinker-1.7.0-py3-none-any.whl.metadata (1.9 kB)
  Using cached MarkupSafe==2.0 (from Jinja2==3.1.2->Flask==3.0.0->r requirements.txt (line 1))
  Downloading MarkupSafe-2.1.3-py32-p312-aac0c10_9_universal2.whl.metadata (2.9 kB)
  Using cached MarkupSafe-2.1.3-py32-p312-aac0c10_9_universal2.whl (19 kB)
  Using cached blinker-1.7.0-py3-none-any.whl (13 kB)
  Using cached click-8.1.7-py3-none-any.whl (97 kB)
  Using cached werkzeug-3.0.0-py3-none-any.whl (19 kB)
  Downloading Werkzeug-3.0.0-py32-p312-cp312-cortex_10_9_universal2.whl (17 kB)
Installing collected packages: MarkupSafe, itsdangerous, click, blinker, Werkzeug, Jinja2, Flask
Successfully installed Flask-3.0.0 Jinja2-3.1.2 MarkupSafe-2.1.3 Werkzeug-3.0.1 blinker-1.7.0 click-8.1.7 itsdangerous-2.1.2

```

# Type

```
pip install -r requirements.txt
```

# Seeing the Code in Action

A screenshot of a code editor (VS Code) showing a Flask application named 'copilot-starter'. The 'app.py' file contains the following code:

```
from flask import Flask
import time

app = Flask(__name__)

def seconds_since_epoch():
    epoch = time.time()
    return int(epoch)

@app.route("/")
def seconds():
    return str(seconds_since_epoch())

if __name__ == "__main__":
    app.run()
```

The terminal below shows the output of running the application with the command `python -m flask run --debug`. It lists the packages being installed and the successful installation of Flask and its dependencies.

```
Collecting itsdangerous<2.2.2 (from Flask==0.4.3)           133/133:1 kB 6.9 MB/s eta 0:00:00
  Using cached itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting click<8.1.3 (from Flask==3.0.0->--r requirements.txt (line 1))
  Using cached click-8.0.3-py3-none-any.whl.metadata (3.0 kB)
Collecting MarkupSafe<2.1.2 (from Flask==3.0.0->--r requirements.txt (line 1))
  Using cached MarkupSafe-2.0.1-py3-none-any.whl.metadata (2.9 kB)
Collecting Jinja2<3.1.2,>=3.1.2 (from Flask==3.0.0->--r requirements.txt (line 1))
  Using cached Jinja2-3.1.0-py3-none-any.whl (99 kB)
Using cached click-8.0.3-py3-none-any.whl (13 kB)
Using cached click-8.1.7-py3-none-any.whl (97 kB)
Using cached Werkzeug<3.1.2,>=3.1.2 (from Flask==3.0.0->--r requirements.txt (line 1))
  Using cached Werkzeug-3.1.2-py312-cp312-macosx_10_9_universal2.whl (17 kB)
Downloaded MarkupSafe-2.1.2-py312-cp312-macosx_10_9_universal2.whl (17 kB)
Installing collected packages: MarkupSafe, itsdangerous, click, blinker, Werkzeug, Jinja2, Flask
Successfully installed Flask-3.0.0 Jinja2-3.1.2 MarkupSafe-2.1.3 Werkzeug-3.0.1 blinker-1.7.0 click-8.1.7 itsdangerous-2.1.2
o /copilot-starter main $ python -m flask run --debug
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 125-093-065
```

## Type

```
python -m flask run --debug
```

# Seeing the Code in Action

TypeError: The view function did not return a valid response. The return type must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but it was a int.

Traceback (most recent call last)

```
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1478, in __call__
    return self.wsgi_app(environ, start_response)
           ~~~~~~  
  
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1458, in wsgi_app
    response = self.handle_exception(e)
           ~~~~~~  
  
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1455, in wsgi_app
    response = self.full_dispatch_request()
           ~~~~~~  
  
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 870, in full_dispatch_request
    return self.finalize_request(rv)
           ~~~~~~  
  
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 889, in finalize_request
    response = self.make_response(rv)
           ~~~~~~  
  
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1197, in make_response
    raise TypeError(  
           ^
```

TypeError: The view function did not return a valid response. The return type must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but it was a int.

The debugger caught an exception in your WSGI application. You can now look at the traceback which led to the error.

To switch between the interactive traceback and the plaintext one, you can click on the "Traceback" headline. From the text traceback you can also create a paste of it. For code execution mouse-over the frame you want to debug and click on the console icon on the right side.

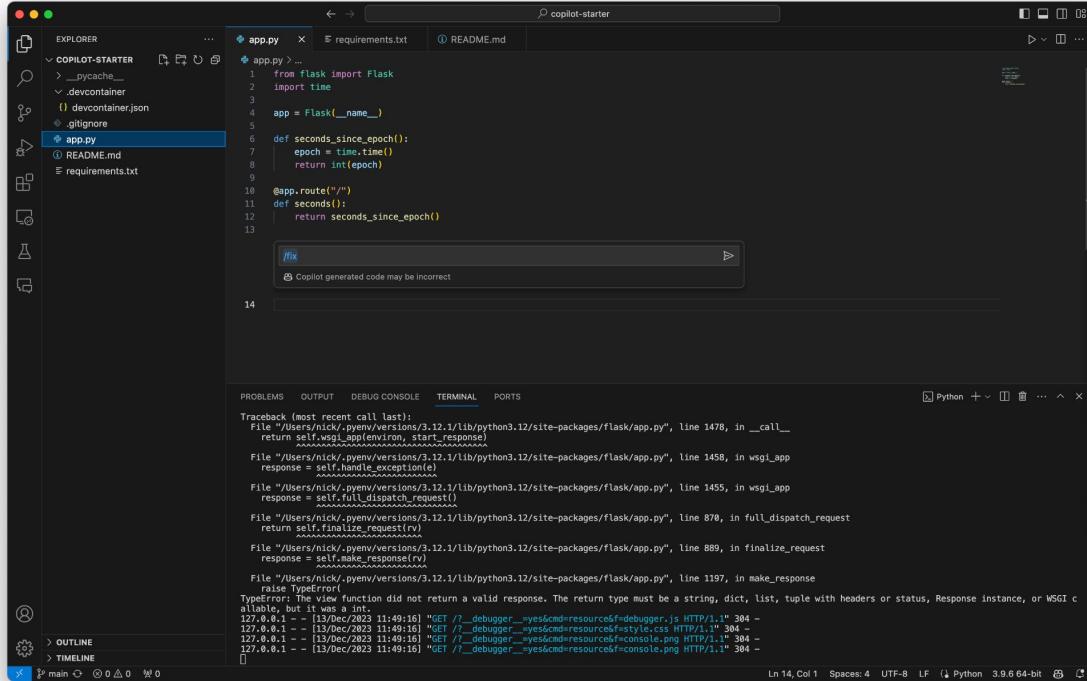
You can execute arbitrary Python code in the stack frames and there are some extra helpers available for introspection:

- `dump()` shows all variables in the frame
- `dump(obj)` dumps all that's known about the object

Brought to you by DONT PANIC, your friendly Werkzeug powered traceback interpreter.



# Fixing the Error



```
app.py
from flask import Flask
import time
app = Flask(__name__)
def seconds_since_epoch():
    epoch = time.time()
    return int(epoch)
@app.route("/")
def seconds():
    return seconds_since_epoch()
```

/fix  
Copilot generated code may be incorrect

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
Traceback (most recent call last):
  File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1478, in __call__
    return self.wsgi_app(environ, start_response)
           ~~~~~
  File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1458, in wsgi_app
    response = self.full_dispatch_request()
               ~~~~~
  File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1455, in wsgi_app
    response = self._handle_exception(exception)
               ~~~~~
  File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 870, in full_dispatch_request
    return self.finalize_request(rv)
           ~~~~~
  File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 889, in finalize_request
    response = self.make_response(rv)
               ~~~~~
  File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1197, in make_response
    raise TypeError(
TypeError: The view function did not return a valid response. The return type must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but it was None.
```

127.0.0.1 - [13/Dec/2023 11:49:16] "GET /\_\_debugger\_eyes6cmd=resource6=f=debugger.js HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:49:16] "GET /\_\_debugger\_eyes6cmd=resource6=f=style.css HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:49:16] "GET /\_\_debugger\_eyes6cmd=resource6=f=console.png HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:49:16] "GET /\_\_debugger\_eyes6cmd=resource6=f=console.png HTTP/1.1" 304 -

**Ctrl-I / ⌘-I**  
Opens GitHub Copilot

Type **/fix**

# Fixing the Error

The screenshot shows a dark-themed VS Code interface. In the Explorer sidebar, there's a folder named 'COPILOT-STARTER' containing files like '.pycache\_\_', '.devcontainer', 'devcontainer.json', '.gitignore', 'app.py', 'README.md', and 'requirements.txt'. The 'app.py' file is open in the editor, showing a simple Flask application. A tooltip 'fix' is displayed over the line 'return seconds\_since\_epoch()'. Below the editor, the 'PROBLEMS' tab is active, showing a long traceback from Python's flask module. The terminal at the bottom shows several requests to a local server on port 1234.

```
from flask import Flask
import time
app = Flask(__name__)
def seconds_since_epoch():
    epoch = time.time()
    return int(epoch)
@app.route("/")
def seconds():
    return seconds_since_epoch()

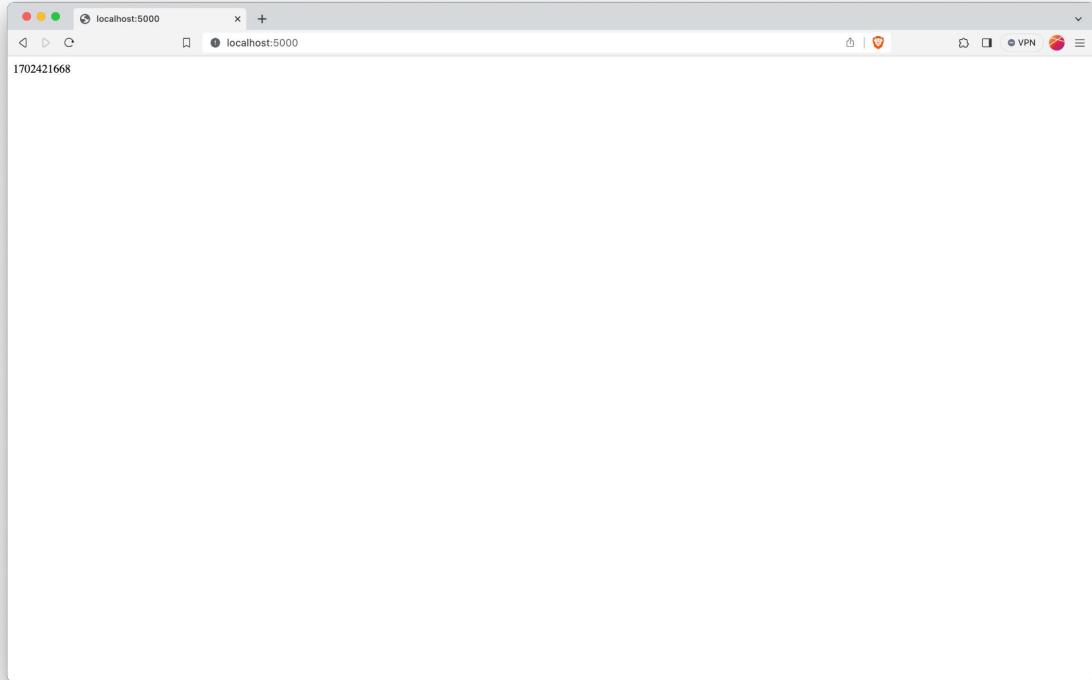
12-- return seconds_since_epoch()           → 12+- return str(seconds_since_epoch()) # Convert the integer to a string before returning
14

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Traceback (most recent call last):
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1478, in __call__
    return self.wsgi_app(environ, start_response)
       ~~~~~
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1458, in wsgi_app
    response = self.full_dispatch_request()
       ~~~~~
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1455, in wsgi_app
    response = self.default_dispatcher(request)
       ~~~~~
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 870, in full_dispatch_request
    return self.finalize_request(rv)
       ~~~~~
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 889, in finalize_request
    response = self.make_response(rv)
       ~~~~~
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1197, in make_response
    raise TypeError(
TypeError: The view function did not return a valid response. The return type must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but it was a <class 'int'>.
127.0.0.1 - [13/Dec/2023 11:49:16] "GET /__debugger_eyeshield/resource/f=debugger.js HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:49:16] "GET /__debugger_eyeshield/resource/f=style.css HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:49:16] "GET /__debugger_eyeshield/resource/f=console.png HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:49:16] "GET /__debugger_eyeshield/resource/f=console.png HTTP/1.1" 304 -
```

**Ctrl-I / ⌘-I**  
Opens GitHub Copilot

Type **/fix**

# Fixing the Error



# Adding to the Program

The screenshot shows the VS Code interface with the following details:

- EXPLORER**: Shows the project structure under "COPILOT-STARTER".
- app.py**: The active file, containing Python code for a Flask application. It includes a function `seconds\_since\_epoch()` that returns the current time as an integer. A tooltip from Copilot suggests adding a route to show hours since the epoch.
- PROBLEMS**: Shows a warning about the `view` function not returning a valid response.
- OUTPUT**: Shows logs for a debugger session, indicating multiple requests to `http://127.0.0.1:5000/debugger/\_yescodr/resource=f=console.png` and a message about reloading the application.
- DEBUG CONSOLE**: Shows the command `Debug: Start`.
- TERMINAL**: Shows the command `Python: Run Python File in Terminal`.
- PORTS**: Shows port 5000 is in use by "nick" (Python 3.12.1).

**Ctrl-I / ⌘-I**

Opens GitHub Copilot

## Type

**add a route that shows  
hours since the epoch**

# Adding to the Program

A screenshot of a code editor (VS Code) showing a Python file named `app.py`. The code defines a Flask application with a route that returns the current epoch time as a string. A GitHub Copilot suggestion box is open at the bottom of the screen, displaying the text "add a route that shows hours since the epoch". Below the suggestion box are two buttons: "Accept" and "Discard". The code editor interface includes an Explorer sidebar on the left showing project files like `requirements.txt`, `README.md`, and `devcontainer.json`. The terminal tab at the bottom shows a log of requests to the application.

```
from flask import Flask
import time
app = Flask(__name__)
def seconds_since_epoch():
    epoch = time.time()
    return int(epoch)
@app.route("/")
def seconds():
    return str(seconds_since_epoch()) # Convert the integer to a string before returning
@app.route("/hours")
def hours():
    seconds = seconds_since_epoch()
    hours = seconds // 3600
    return str(hours)
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 870, in full_dispatch_request
    return self.finalize_request(rv)
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 889, in finalize_request
    response = self.process_response(rv)
File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1197, in make_response
    raise TypeError("New function did not return a valid response. The return type must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but it was a %s" % type(rv))
127.0.0.1 - - [13/Dec/2023 11:54:25] "GET /_debugger/_yes?cmd=resource&f=style.css HTTP/1.1" 304 -
127.0.0.1 - - [13/Dec/2023 11:54:25] "GET /_debugger/_yes?cmd=resource&f=script.js HTTP/1.1" 304 -
127.0.0.1 - - [13/Dec/2023 11:54:25] "GET /_debugger/_yes?cmd=resource&f=console.png HTTP/1.1" 304 -
127.0.0.1 - - [13/Dec/2023 11:54:25] "GET /_debugger/_yes?cmd=resource&f=console.png HTTP/1.1" 304 -
* Detected change in '/Users/nick/dev/copilot-starter/app.py', reloading
* Restarting with stat
* Debugger is active!
* Debugger PIN: 125-093-065
127.0.0.1 - - [13/Dec/2023 11:54:28] "GET / HTTP/1.1" 200 -
* Detected change in '/Users/nick/dev/copilot-starter/app.py', reloading
* Restarting with stat
* Debugger is active!
* Debugger PIN: 125-093-065
```

**Ctrl-I / ⌘-I**

Opens GitHub Copilot

Type

add a route that shows  
hours since the epoch

# Pairing with Copilot

```
app.py 2, M  requirements.txt  README.md

app.py > ...
1  from flask import Flask
2  import time
3
4  app = Flask(__name__)
5
6  def seconds_since_epoch():
7      epoch = time.time()
8      return int(epoch)
9
10 @app.route("/")
11 def seconds():
12     return str(seconds_since_epoch()) # Convert the integer to a string before returning
13
14 @app.route("/hours")
15 def hours():
16     seconds = seconds_since_epoch()
17     hours = seconds // 3600
18     return str(hours)
19
20 @app.route("/minutes")
21     route
22     run
23     secret_key
24     send_file, autoescape
25     session_interface
26     shell_context_processor
27     session_interface
28     shell_context_processor
File "/Users/nick/dev/copilot-starter/app.py", line 1197, in make_response
    raise TypeError(f"headers must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but got {type(headers)}") from e
TypeModelError: headers must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but got <class 'dict'>
127.0.0.1 - [13/Dec/2023 11:54:25] "GET / HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:54:25] "GET /__debugger__/_yescmd/resource/f=style.css HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:54:25] "GET /__debugger__/_yescmd/resource/f=console.png HTTP/1.1" 304 -
127.0.0.1 - [13/Dec/2023 11:54:25] "GET /__debugger__/_yescmd/resource/f=console.png HTTP/1.1" 304 -
* Detected change in '/Users/nick/dev/copilot-starter/app.py', reloading
* Restarting with stat
* Debugger PIN: 125-093-065
* Debugger PIN: 125-093-065
* Detected change in '/Users/nick/dev/copilot-starter/app.py', reloading
* Restarting with stat
* Debugger PIN: 125-093-065
* Debugger PIN: 125-093-065
127.0.0.1 - [13/Dec/2023 11:54:28] "GET / HTTP/1.1" 200 -
127.0.0.1 - [13/Dec/2023 12:04:01] "GET / HTTP/1.1" 200 -
127.0.0.1 - [13/Dec/2023 12:04:05] "GET /hours HTTP/1.1" 200 -
```

Start creating a new route for /minutes

Tab ↗

# Pairing with Copilot

```
app.py > ...
1  from flask import Flask
2  import time
3
4  app = Flask(__name__)
5
6  def seconds_since_epoch():
7      epoch = time.time()
8      return int(epoch)
9
10 @app.route("/")
11 def seconds():
12     return str(seconds_since_epoch()) # Convert the integer to a string before returning
13
14 @app.route("/hours")
15 def hours():
16     seconds = seconds_since_epoch()
17     hours = seconds // 3600
18     return str(hours)
19
20 @app.route("/minutes")
21 def minutes():
22     seconds = seconds_since_epoch()
23     minutes = seconds // 60
24     return str(minutes)

File "/Users/nick/.pyenv/versions/3.12.1/lib/python3.12/site-packages/flask/app.py", line 1197, in make_response
    raise TypeError('The view function did not return a valid response. The return type must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but it was ' + str(type(value)))
TypeError: The view function did not return a valid response. The return type must be a string, dict, list, tuple with headers or status, Response instance, or WSGI callable, but it was <class 'int'>
[13/Dec/2023 11:54:25] "GET /_debugger__yes6cmd=resourcef=fstyle.css HTTP/1.1" 304 -
127.0.0.1 - - [13/Dec/2023 11:54:25] "GET /_debugger__yes6cmd=resourcef=debugger.js HTTP/1.1" 304 -
127.0.0.1 - - [13/Dec/2023 11:54:25] "GET /_debugger__yes6cmd=resourcef=console.png HTTP/1.1" 304 -
127.0.0.1 - - [13/Dec/2023 11:54:25] "GET /_debugger__yes6cmd=resourcef=console.png HTTP/1.1" 304 -
* Detected change in '/Users/nick/dev/copilot-starter/app.py', reloading
* Restarting with stat
* Debugger is active!
* Debugger PIN: 125-093-065
127.0.0.1 - - [13/Dec/2023 11:54:28] "GET / HTTP/1.1" 200 -
* Detected change in '/Users/nick/dev/copilot-starter/app.py', reloading
* Restarting with stat
* Debugger is active!
* Debugger PIN: 125-093-065
127.0.0.1 - - [13/Dec/2023 12:04:01] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [13/Dec/2023 12:04:05] "GET /hours HTTP/1.1" 200 -
```

Start creating a new route for /minutes

Tab ↗

# Next Steps



## Remember: Copilot Makes Errors

Copilot is built on OpenAI's GPT-4 model.

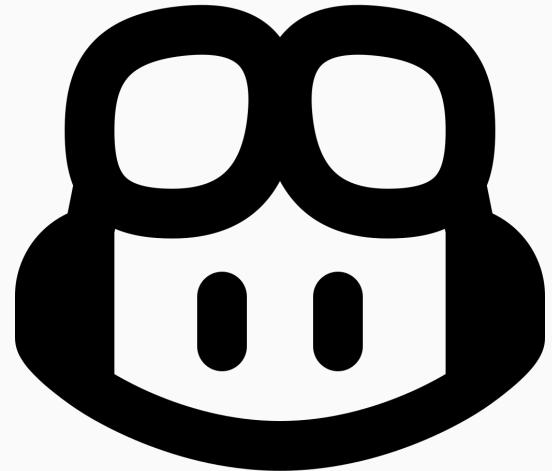
It will write bad code and it won't understand what you want every time.

It also only has code samples up to September 2021, so it won't know about new libraries, APIs, etc.

You'll need to read, understand, and edit the code it produces, but ***you're a hacker, you'll do great.***

# Add Copilot to Your Team

GitHub Copilot is here for you the entire hackathon and can do even more with more complicated code. Keep Copilot pairing with you for the event.



It won't even ask for prizes if you win.

Create a new button component ➔

Accept

Discard

/fix myVar is undefined ➔

Accept

Discard

/explain ➔

Accept

Discard

# Additional Resources

**[hackp.ac/copilot-guides](#)**: Set up and navigate the various functions of GitHub Copilot across all of the supported environments.

**[hackp.ac/copilot-examples](#)**: See practical examples of how GitHub Copilot can help you work.

**[hackp.ac/copilot-config](#)**: Learn how to configure GitHub Copilot to your personal preferences.