Master VS Code for Python like a pro with these time-saving tips and shortcuts!"

Data Science Essentials

VS code Python Tricks and Tips-Part2 (using Microsoft CoPilot)

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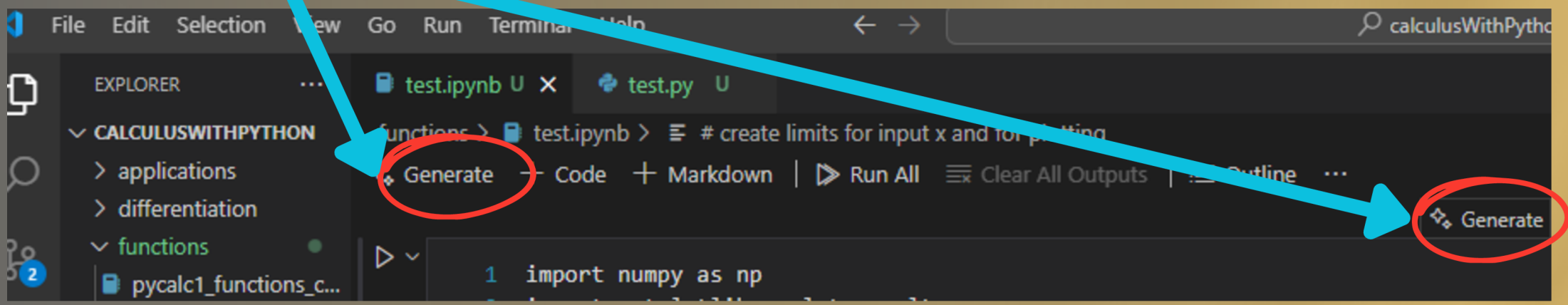
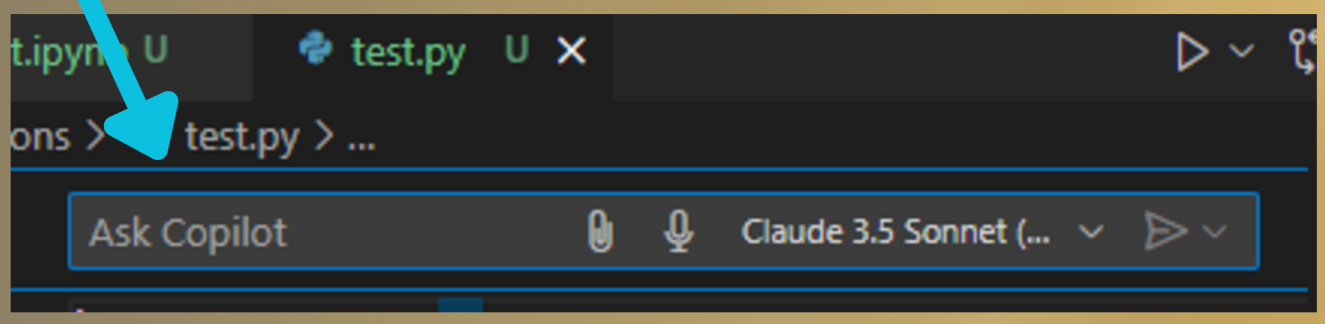
VS code Python Tricks and Tips

Accessing Copilot

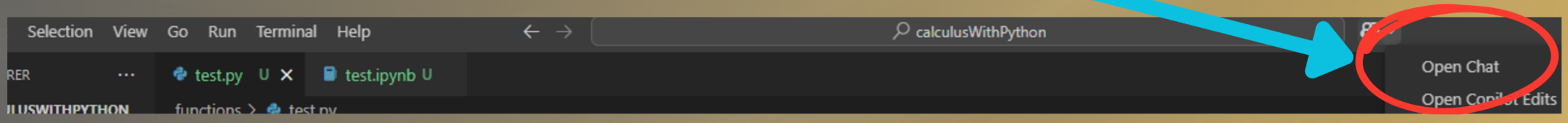
- Jupyter notebook -> Select Generate



- Python Script-> Type CTRL + I



- Python Script/Jupyter notebook-> Click Open Chat

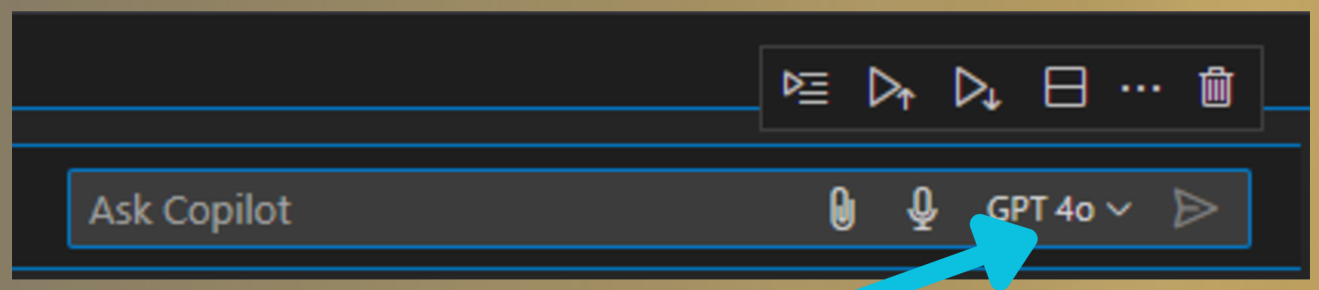


VS code Python Tricks and Tips

Using Copilot

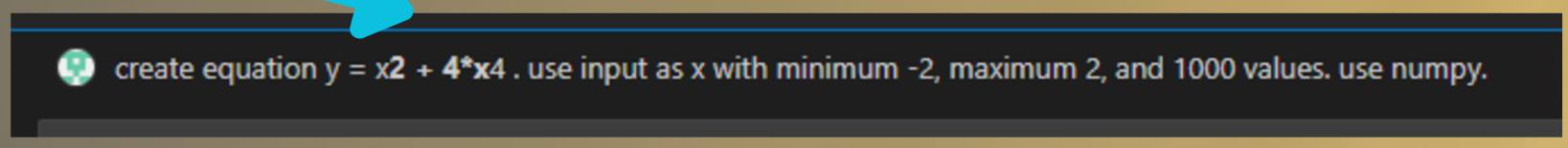
Jupyter notebook

Click Generate

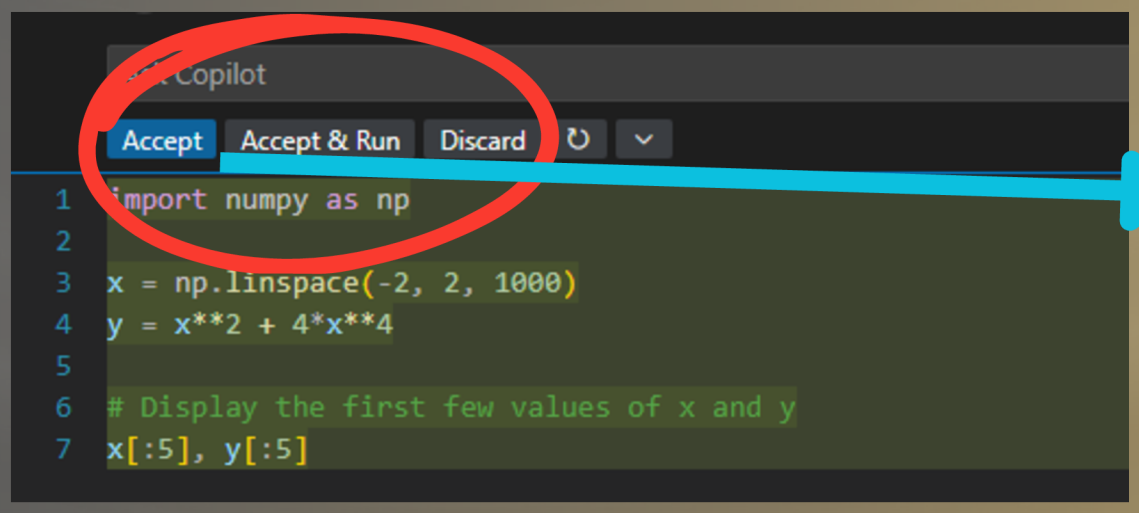


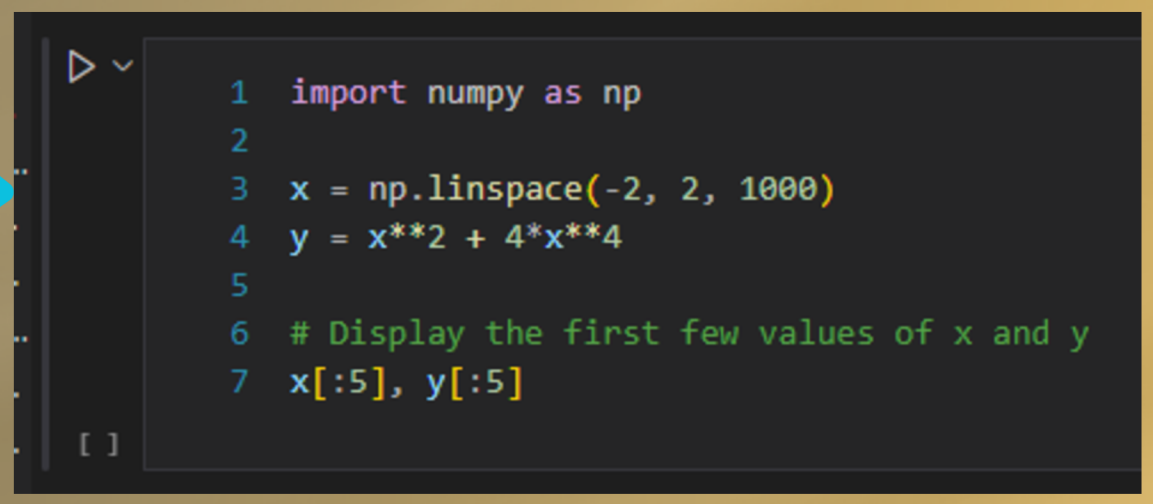
Pro Tip:Choose Model : OpenAi GPT 4o or Claude 3.5 Sonnet

Write Prompt for task at hand -> Press Play/Right Arrow button



Accept the code , Discard it or rewrite the prompt



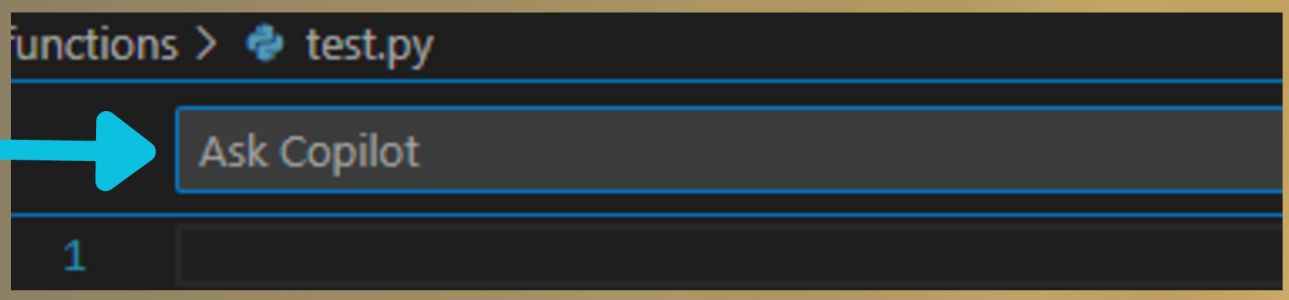


VS code Python Tricks and Tips

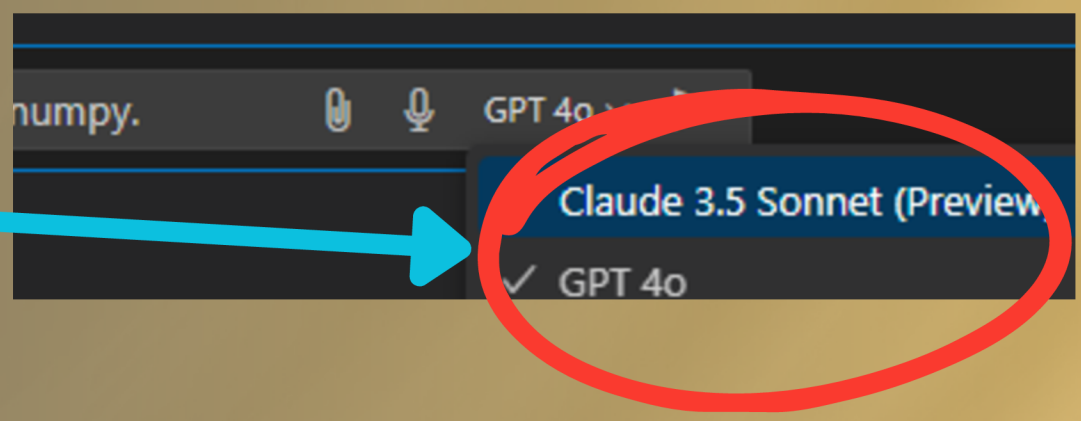
Using Copilot

Python Script

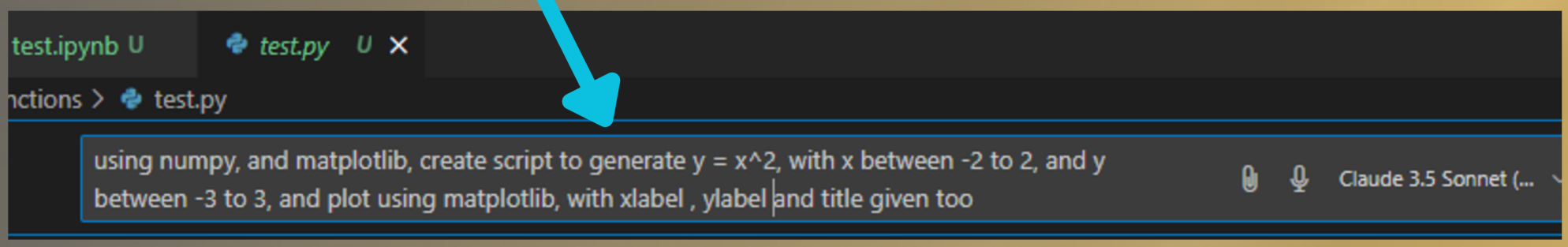
Press Ctrl + I -> opens Copilot



Pro Tip:Choose Model : OpenAi GPT 4o or Claude 3.5 Sonnet



Write Prompt for task at hand -> Press Play/Right Arrow button



VS code Python Tricks and Tips

- Using Copilot
- Python Script

Prompt result: Generated code

test.ipynb U test.py U

functions > test.py > ...

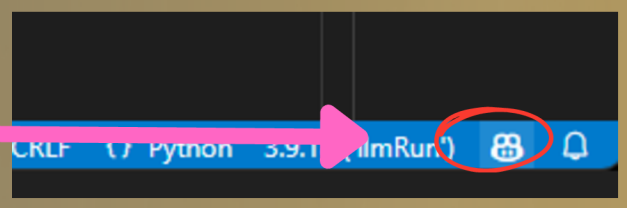
```python
import numpy as np

import matplotlib.pyplot as plt

# Generate x values from -2 to 2
x = np.linspace(-2, 2, 100)

# Calculate y values using x^2
y = x**2

# Create the plot
plt.figure(figsize=(8, 6))
plt.plot(x, y, 'b-', label='y = x²')

# Set axis limits
plt.xlim(-2, 2)
plt.ylim(-3, 3)

# Add labels and title
plt.xlabel('x')
plt.ylabel('y')
plt.title('Quadratic Function: y = x²')

# Add grid and legend
plt.grid(True)
plt.legend()

# Display the plot
plt.show()
```

VS code Python Tricks and Tips

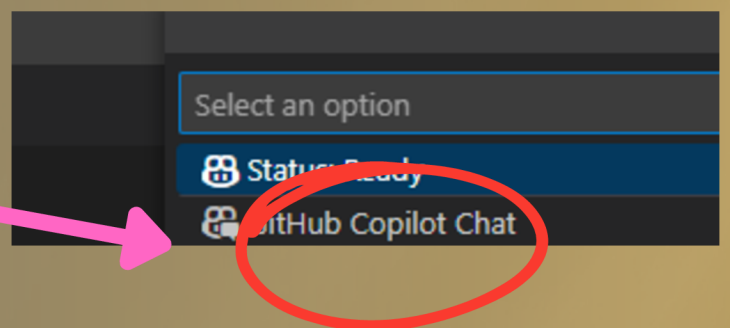
Using Copilot

Python Script

Enabling chat again in script ->
Press icon on lower right corner :
Show Copilot Status Menu

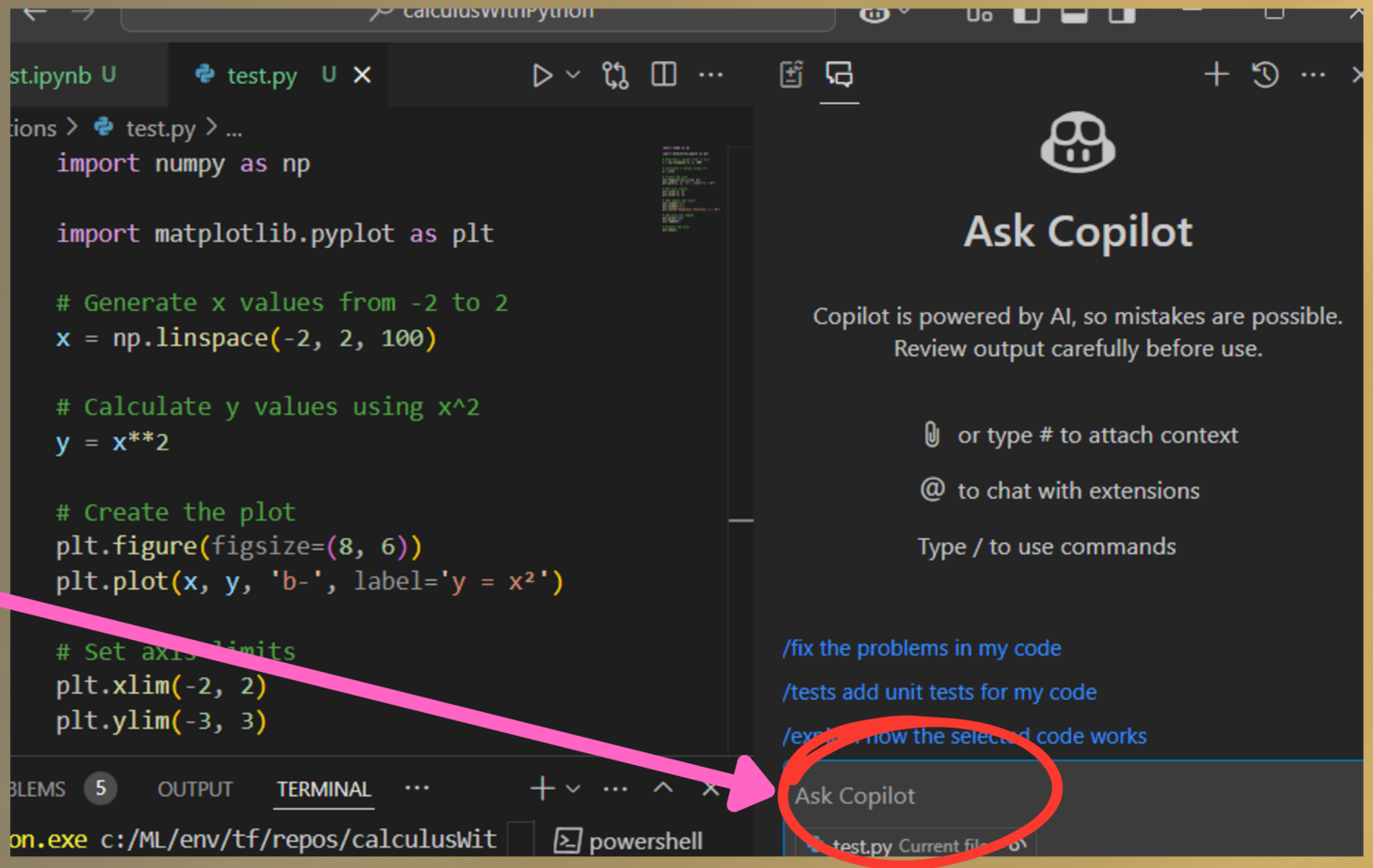


Choose : GitHub Copilot Chat



Prompt in the right panel Chat Window : Get results

Can be used for general programming or any other questions too

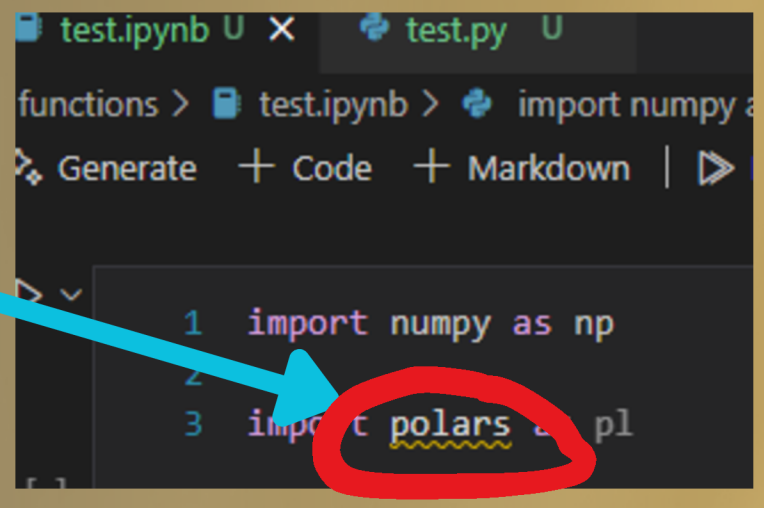


VS code Python Tricks and Tips

Using Copilot

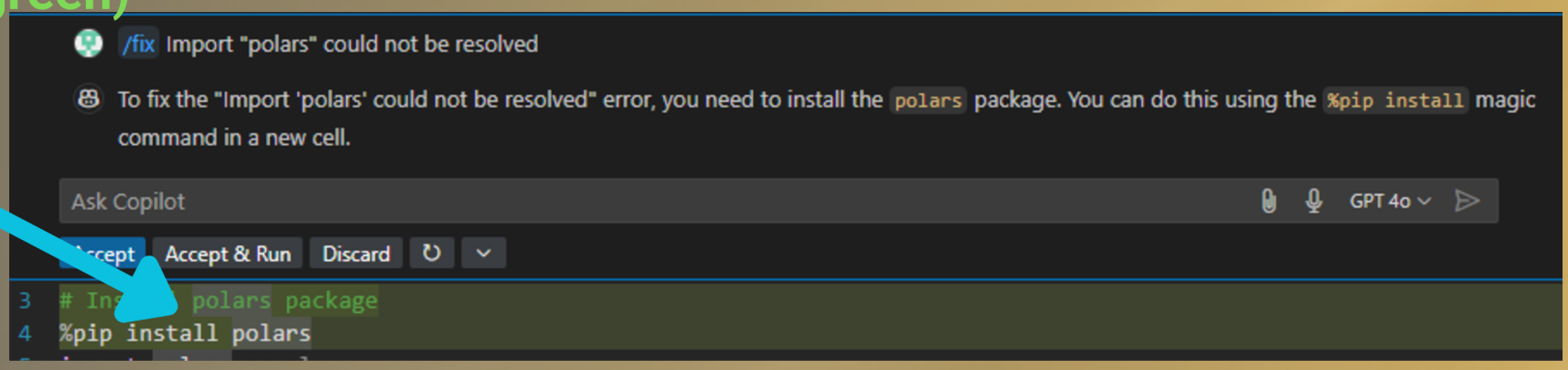
Fix Code errors

Hover cursor over Yellow Wavy underlined code

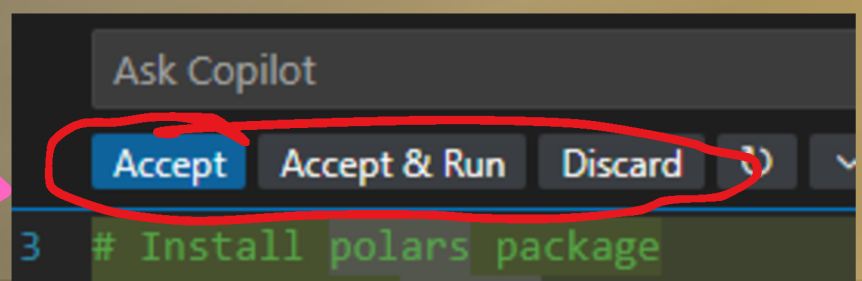


Check the message and choose - > Fix using Copilot

Review the response from Copilot (Highlighted in green)



Accept or Discard the solution



VS code Python Tricks and Tips

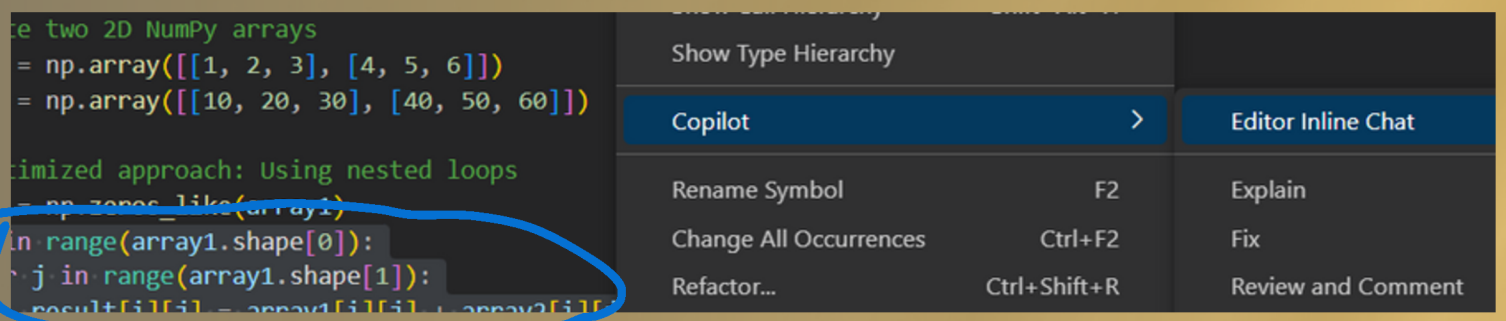
Using Copilot

Optimize code

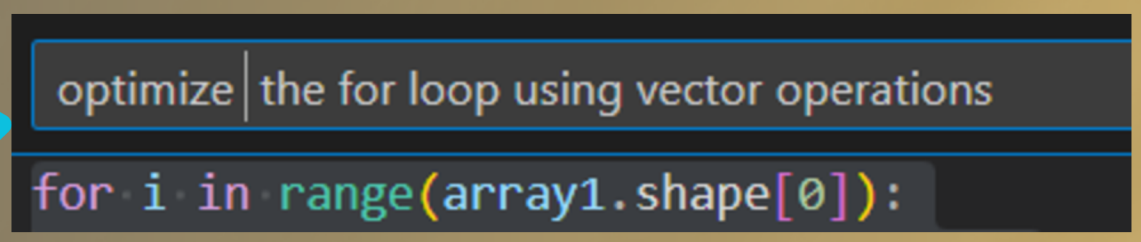
Unoptimized portion of the code

```python
# Create two 2D NumPy arrays
array1 = np.array([[1, 2, 3], [4, 5, 6]])
array2 = np.array([[10, 20, 30], [40, 50, 60]])

# Unoptimized approach: Using nested loops
result = np.zeros_like(array1)
for i in range(array1.shape[0]):
    for j in range(array1.shape[1]):
        result[i][j] = array1[i][j] + array2[i][j]
```

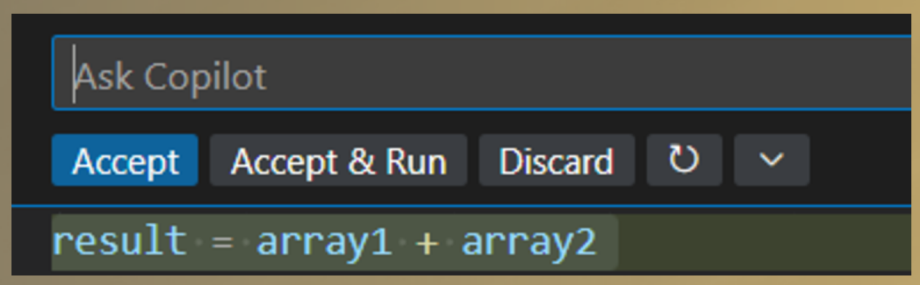
Select code to be optimized -> Right click -> Copilot -> Editor Inline Chat



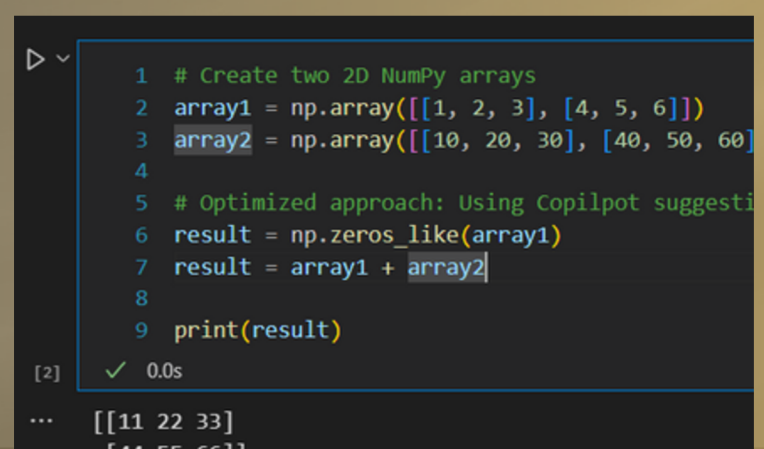
Enter prompt for Copilot to optimized the code



Accept or Discard the solution



Accepted solution that matches unoptimized solution



VS code Python Tricks and Tips

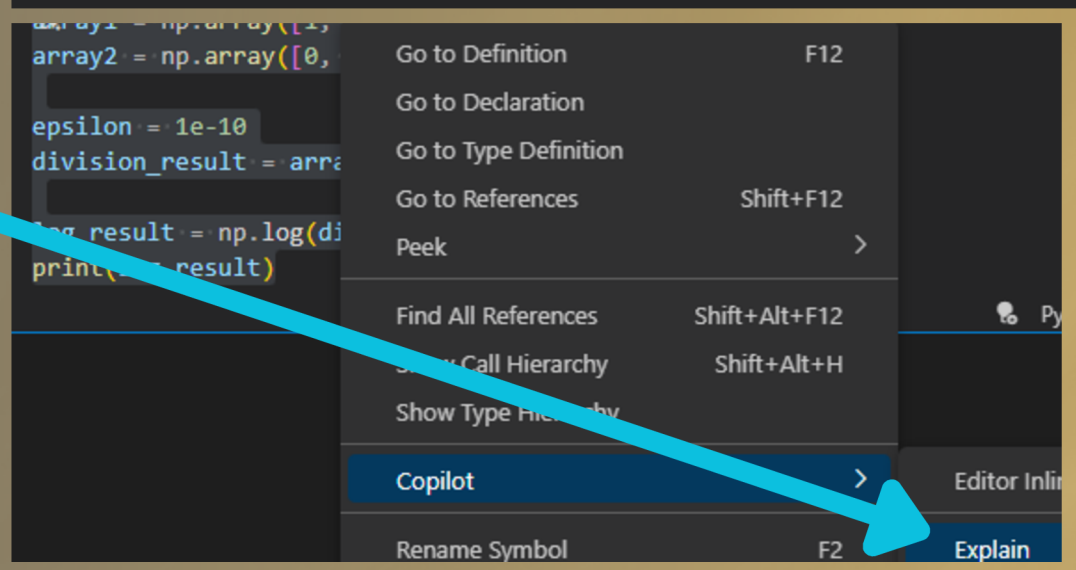
Using Copilot

Understand code

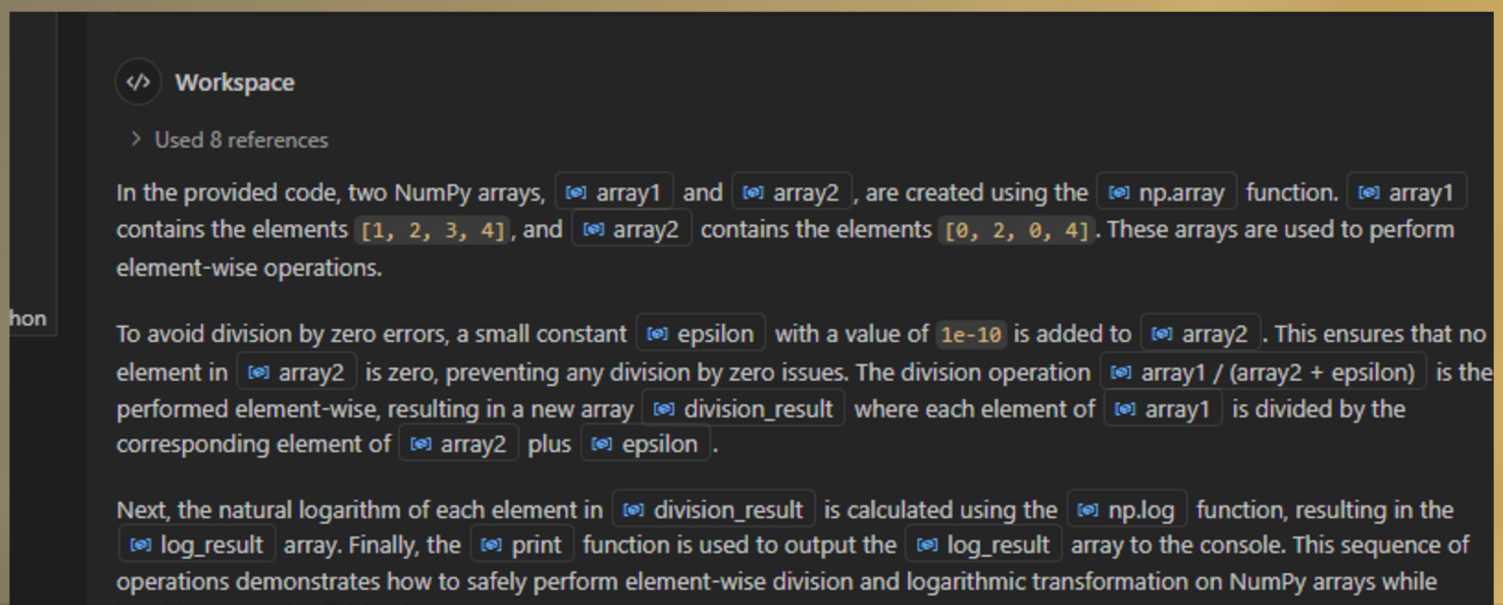
Code snippet without comments

```
1
2  array1 = np.array([1, 2, 3, 4])
3  array2 = np.array([0, 2, 0, 4])
4
5  epsilon = 1e-10
6  division_result = array1 / (array2 + epsilon)
7
8  log_result = np.log(division_result)
9  print(log_result)
```

Select code to be optimized ->
Right click -> Copilot -> Explain



Review explanation in workspace



VS code Python Tricks and Tips

Using Copilot

Add inline comments

Code without comments

```
6  result = np.zeros_like(array1)
7  result = array1 + array2
8
9  print(result)
```

At end of code line -> Press Tab
-> comment shown in Gray ->
Tab again -> Accept in Green

```
result = np.zeros_like(array1)  # Create an array of zeros with the same shape as array1
result = array1 + array2
```

```
result = np.zeros_like(array1)  # Create an array of zeros with the same shape as array1
result = array1 + array2

print(result)
```

add comments for rest of the code

```
result = np.zeros_like(array1)  # Create an array of zeros with the same shape as array1
result = array1 + array2    # Add the two arrays element-wise

print(result) # Output: [[11 22 33]
```

VS code Python Tricks and Tips

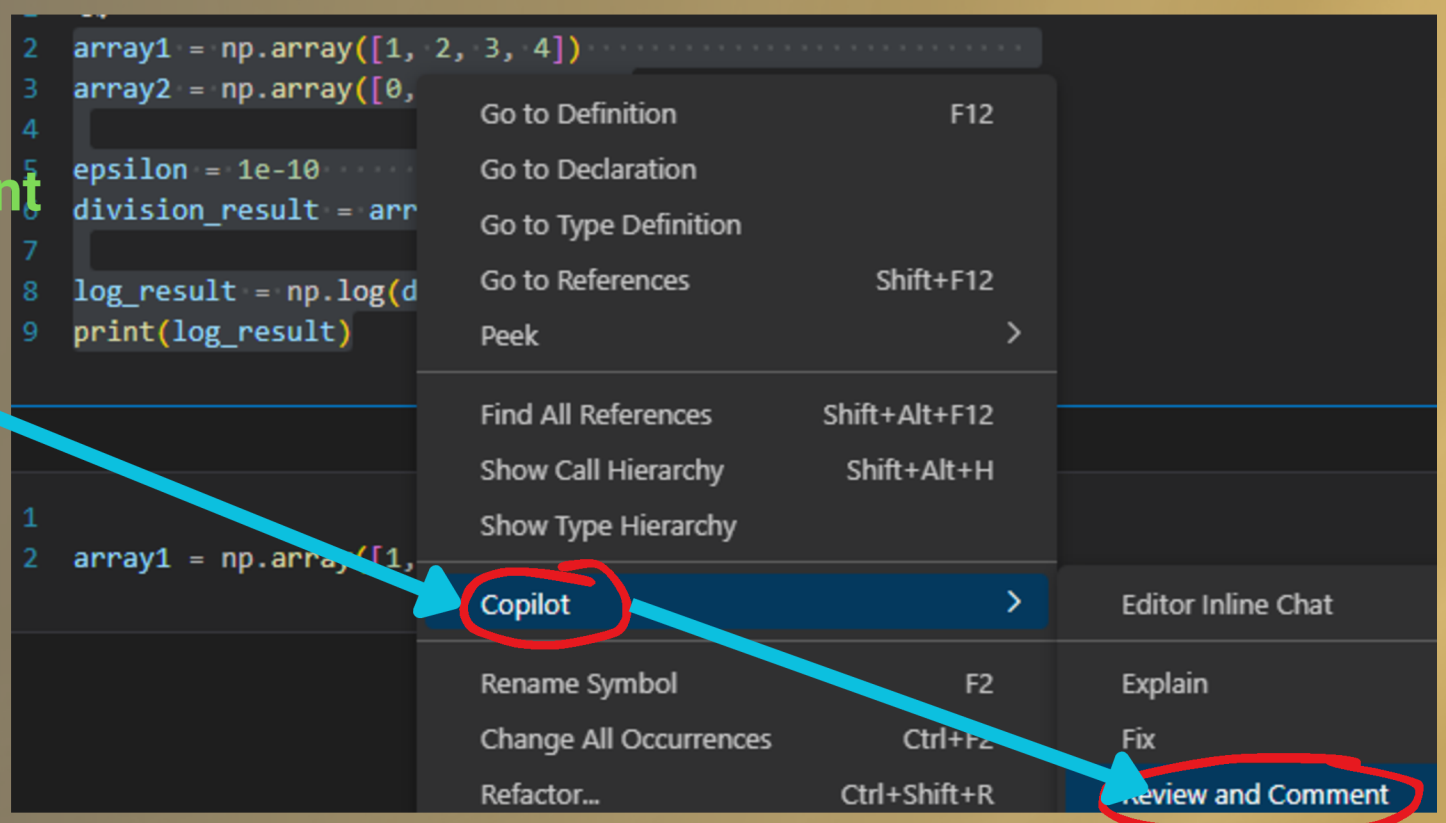
Using Copilot

Review and Comment

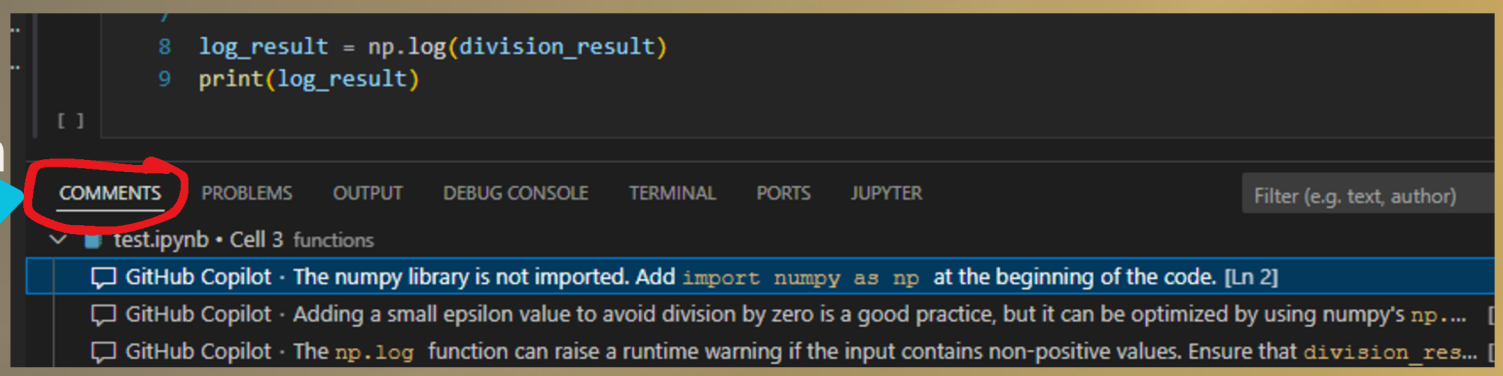
Code without comments

```
1
2  array1 = np.array([1, 2, 3, 4])
3  array2 = np.array([0, 2, 0, 4])
4
5  epsilon = 1e-10
6  division_result = array1 / (array2 + epsilon)
7
8  log_result = np.log(division_result)
9  print(log_result)
```

Select -> Right click ->
Copilot -> Review and Comment



Choose Comments at bottom pane -> Review suggestions

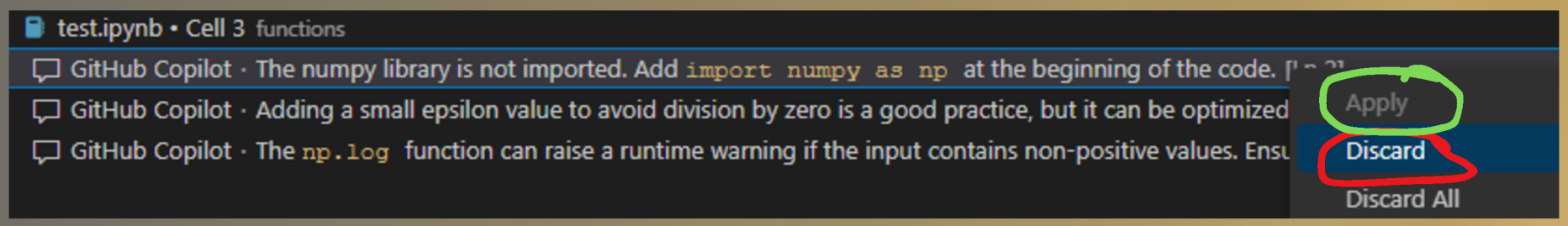


VS code Python Tricks and Tips

Using Copilot

Review and Comment – cntd

Discard comment (if not relevant) or apply the change if needed



Choose Comments at bottom pane -> Review suggestions

If you find this helpful, please like and share it