Web, APIs, and Automation Cheatsheet (Python 3.13 · VS Code)

Chris N John · Cleveland, OH

January 12, 2026

Refresher/Intermediate

1) HTTP Requests with requests

Perform GET and POST requests.

```
import requests
resp = requests.get('https://api.example.com/data')  # GET: fetch resource
print(resp.json())  # json: parse response
```

2) Authentication

Use headers for Bearer tokens.

```
headers = {'Authorization': 'Bearer TOKEN'}
resp = requests.get('https://api.example.com/secure', headers=headers)
```

3) Web Scraping

Extract data using BeautifulSoup.

```
from bs4 import BeautifulSoup
html = '<html><body><p>Hello</p></body></html>'
soup = BeautifulSoup(html, 'html.parser')
print(soup.find('p').text)
```

4) Automation Patterns

Schedule tasks using schedule.

```
import schedule, time
def job():
    print('Task running')
schedule.every(10).seconds.do(job)
while True:
    schedule.run_pending()
    time.sleep(1)
```

5) PowerShell Integration

Run Python scripts via CLI.

```
# PowerShell
python .\script.py --arg value
```

Mini-Project Script

```python
# Mini-Project: Fetch API -> Transform -> Save CSV
import requests, pandas as pd
resp = requests.get('https://jsonplaceholder.typicode.com/posts')
data = resp.json()
df = pd.DataFrame(data)
df.to_csv('api_data.csv', index=False)
print('Saved api_data.csv')
```

VS Code Launch Configuration (launch.json)

```json
{
  "version": "0.2.0",
  "configurations": [
    {
      "name": "Web API Mini-Project",
      "type": "python",
      "request": "launch",
      "program": "${workspaceFolder}/web_api_project.py",
      "console": "integratedTerminal"
    }
  ]
}
```