Create Python virtual environment (venv) in VS Code

Step 1: Open terminal in VS Code

Step 2: Navigate to your project folder

cd ai-model-evaluator

Step 3: Create virtual environment

python3 -m venv .venv

(Windows)
python -m venv .venv

Step 4: Activate virtual environment

macOS / Linux
source .venv/bin/activate

Windows (PowerShell)
.venv\\Scripts\\Activate

You should now see:
(.venv) $

5️⃣ Install dependencies, keep requirements.txt outside .venv

pip3 install -r requirements.txt

6️⃣ Select venv in VS Code (IMPORTANT)

1. Press **Cmd + Shift + P** (Mac) or **Ctrl + Shift + P** (Windows)
2. Type **Python: Select Interpreter**
3. Choose:

./venv/bin/python

7️⃣ **Add .env support in VS Code**
Make sure your script has:

```
from dotenv import load_dotenv
load_dotenv()
```

VS Code will auto-load .env when running Python.

8️⃣ Verify setup

Run:
python ai_model_evaluation.py

If keys are loaded correctly:

- No authentication errors
- Models start responding

9️⃣ **Best Practices (Highly Recommended)**
.gitignore

```
venv/
.env
__pycache__/
```

Check env variables loaded

```
import os
print(os.getenv("OPENAI_API_KEY")[:5])
```

Create Python virtual environment (venv) in VS Code - 3.9.10. to 3.10.13

1️⃣ Install Python 3.10 using pyenv

```
# List available Python versions
pyenv install --list | grep 3.10

# Install the latest 3.10.x version, e.g.
pyenv install 3.10.13
```

2️⃣ Set Python 3.10 locally for your project

```
# Set Python 3.10 for the current shell
pyenv shell 3.10.13

# Or set it for this directory (recommended)
pyenv local 3.10.13
```

Check:

```
python --version
# Should print: Python 3.10.13
```

3️⃣ Create a new virtual environment with 3.10

```
python3 -m venv .venv
source .venv/bin/activate
```

4️⃣ Install dependencies

```
pip3 install --upgrade pip
pip3 install -r requirements.txt
```