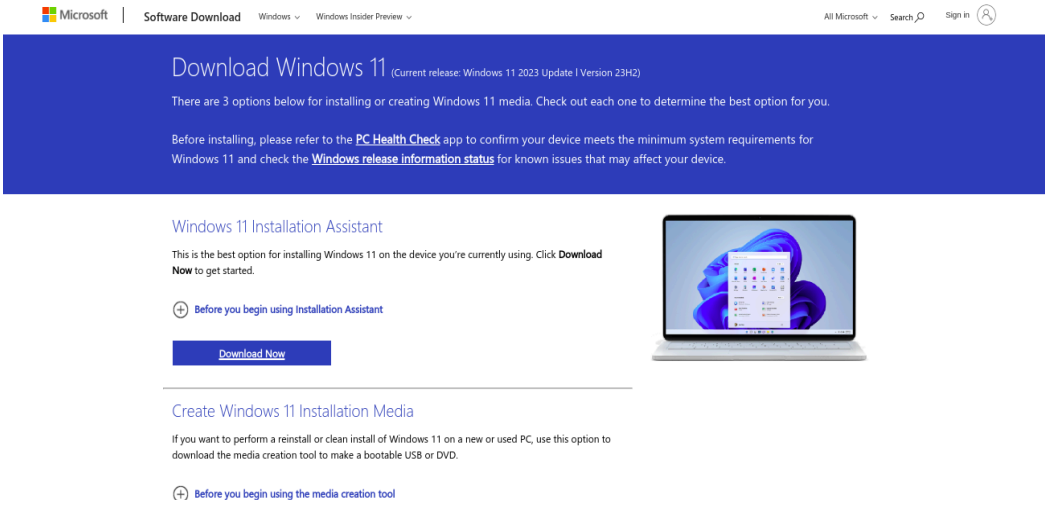
Setting Up Developer Environment

1. Select Your Operating System (OS)

Download and Install Windows 11:

1. Go to the Windows 11 download page:
https://www.microsoft.com/software-download/windows11

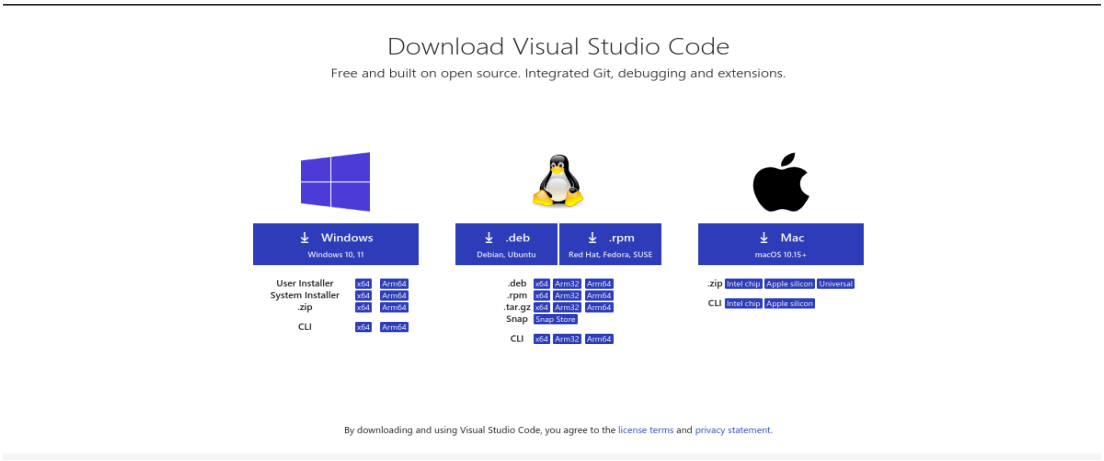


2. Click on "Download now" and follow the instructions to create installation media.
3. Boot from the installation media and follow the prompts to install Windows 11.

2. Install an Integrated Development Environment (IDE)

Download and Install Visual Studio Code:

1. Go to the Visual Studio Code download page: **https://code.visualstudio.com/Download**



2. Choose the version for Windows and download the installer.
3. Run the installer and follow the installation wizard to complete the setup.

3. Set Up Version Control System

Install Git:

1. Go to the Git download page: **https://git-scm.com/download/win**

2. Download the installer and run it, following the installation steps.

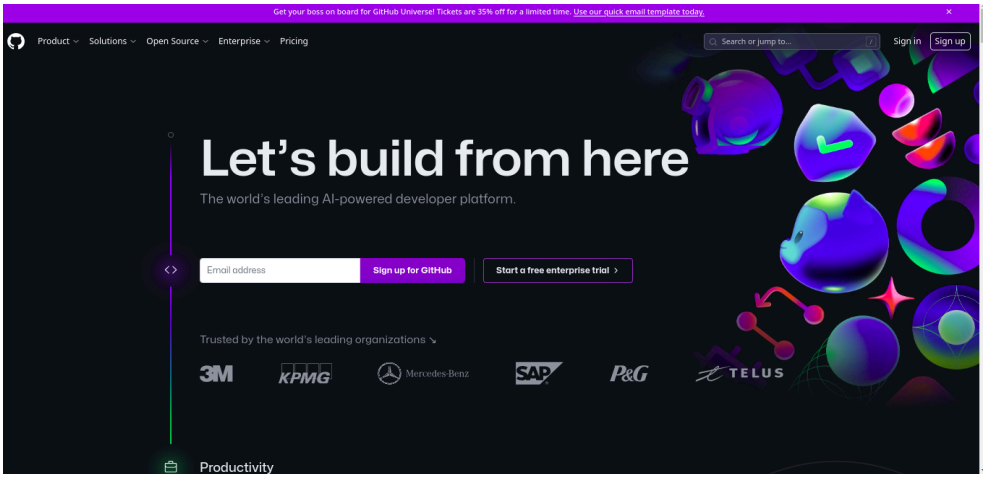
Configure Git:

1. Open a terminal (Command Prompt or Git Bash) and run the following commands:

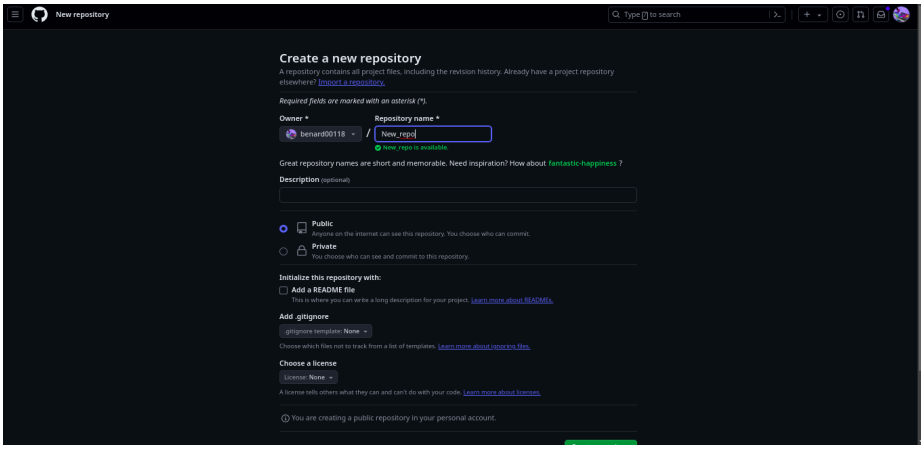
```
**git config --global user.name "Benard Karanja"**
**git config --global user.email "benardopeter4l@gmail.com"**
```

Create a GitHub Account:

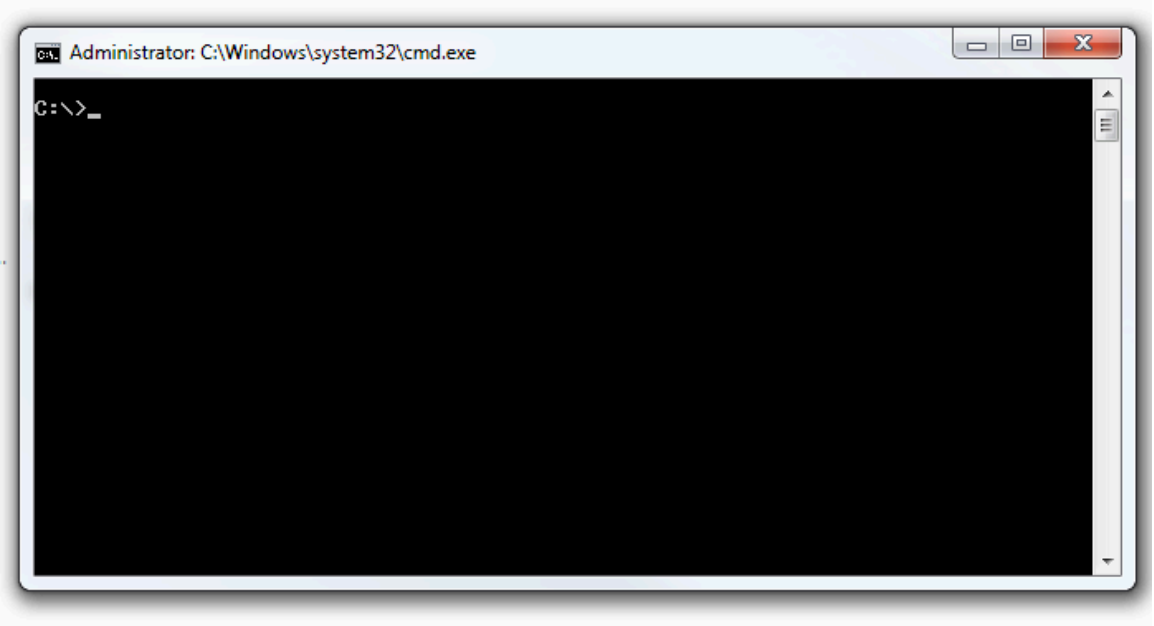
1. Go to GitHub: **https://github.com** and sign up for a new account.



Initialize a Git Repository and Make Your First Commit:



1. Navigate to your project directory in the terminal.



2. Initialize a Git repository:

```
**git init**
```

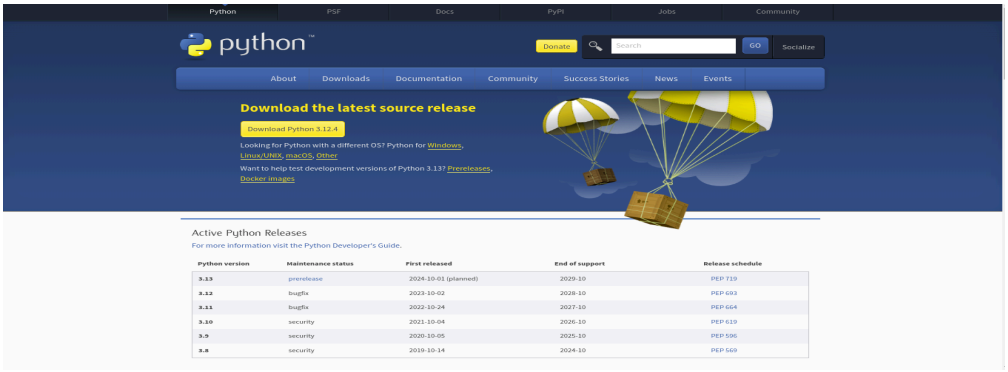
3. Create a new file and make your first commit:

```
**echo "# MyProject" >> README.md**
**git add README.md**
**git commit -m "First commit"**
```

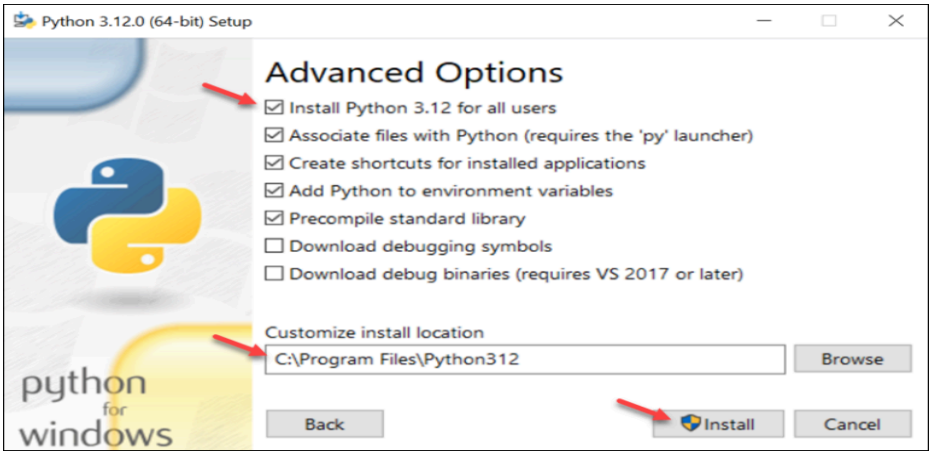
4. Install Necessary Programming Languages and Runtimes

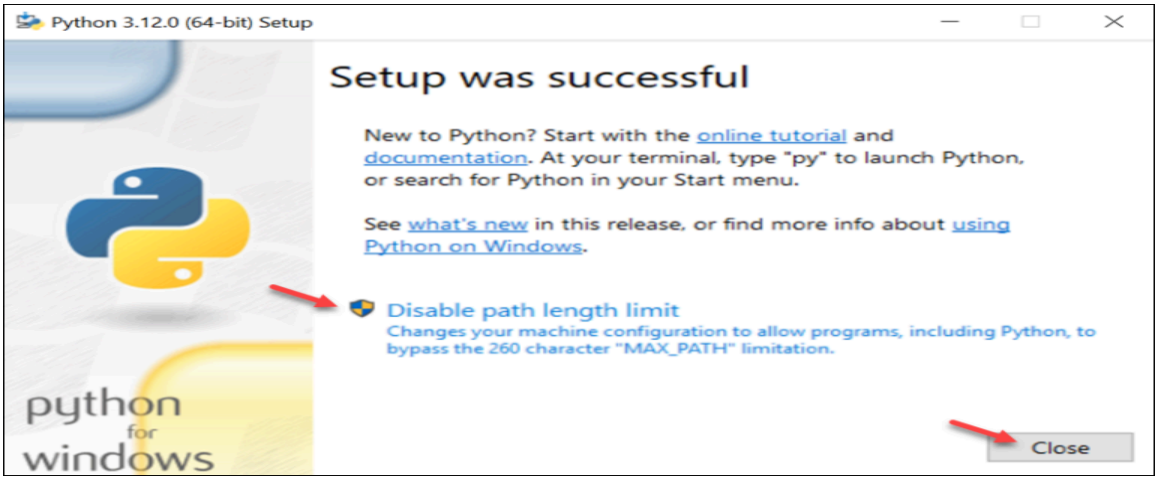
Install Python:

1. Go to the Python download page: **https://www.python.org/downloads/**



2. Download the installer and run it, ensuring you check the option to add Python to your PATH.
3. Follow the installation steps.



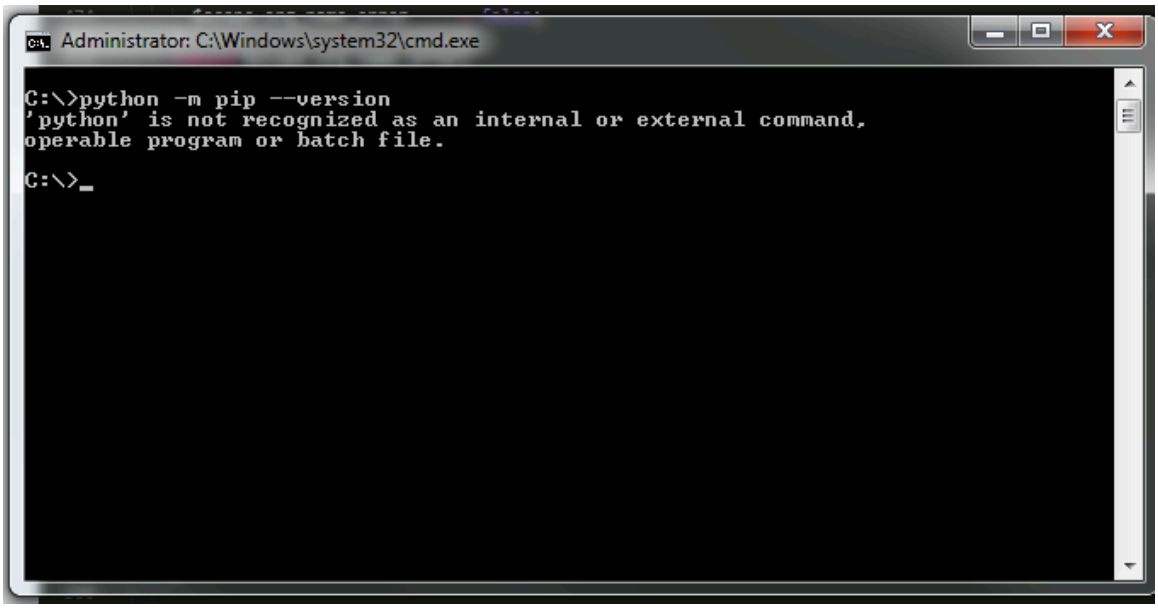


5. Install Package Managers

Install pip for Python:

- Pip is included with Python installation by default. You can verify it by running:

```
pip --version
```

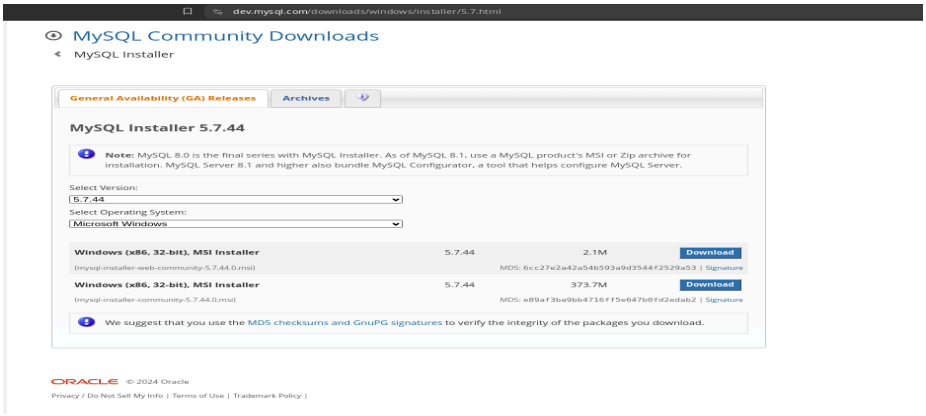


6. Configure a Database (MySQL)

Download and Install MySQL:

1. Go to the MySQL download page:

https://dev.mysql.com/downloads/windows/installer/5.7.html

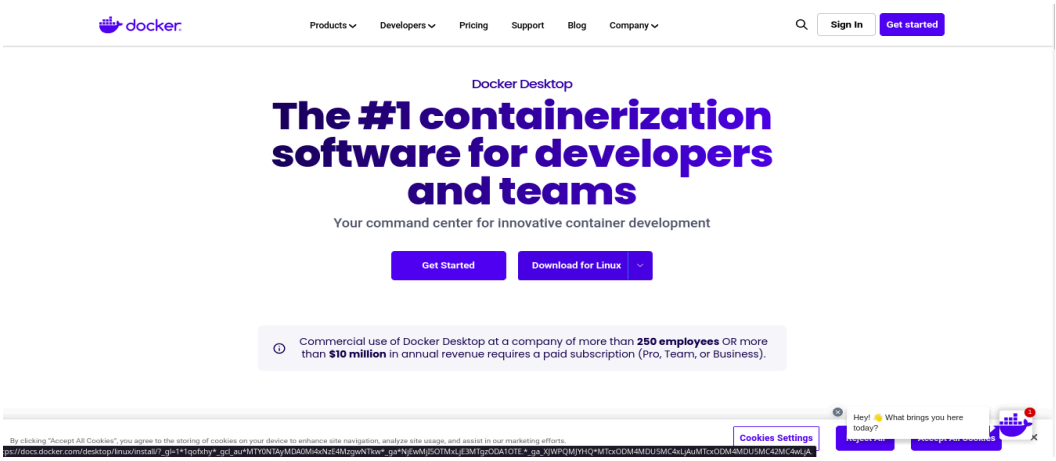


2. Download the MySQL Installer and run it.
3. Follow the installation steps, choosing the appropriate configuration for your setup.

7. Set Up Development Environments and Virtualization (Optional)

Install Docker:

1. Go to the Docker download page: https://www.docker.com/products/docker-desktop



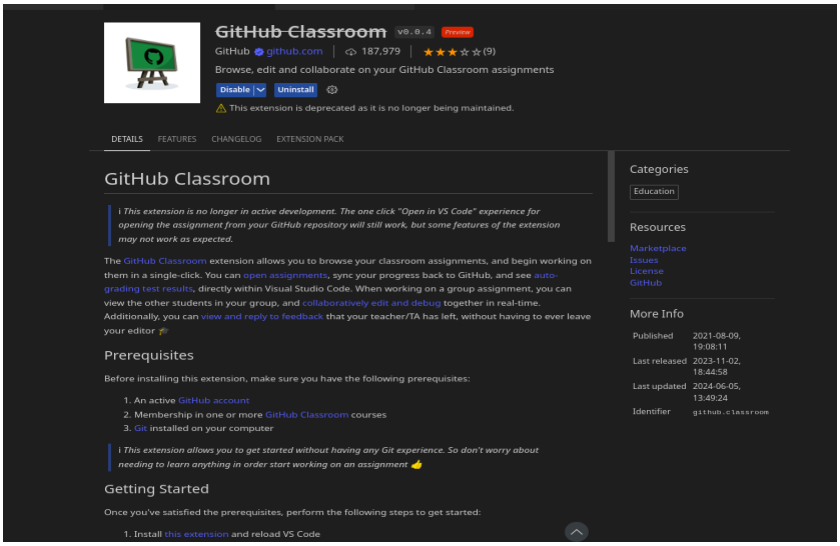
2. Download Docker Desktop for Windows and install it.
3. Follow the setup instructions to get Docker up and running.

8. Explore Extensions and Plugins

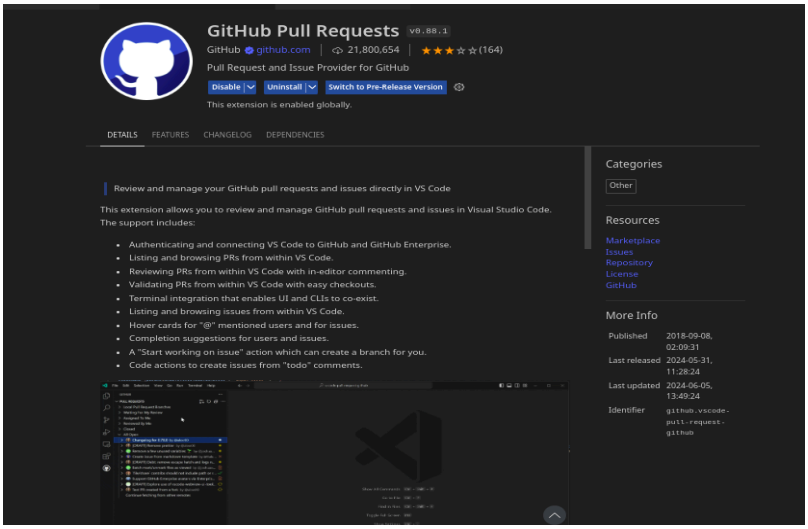
Install Extensions in Visual Studio Code:

1. Open Visual Studio Code and go to the Extensions view (Ctrl+Shift+X).
2. Search for and install useful extensions like:

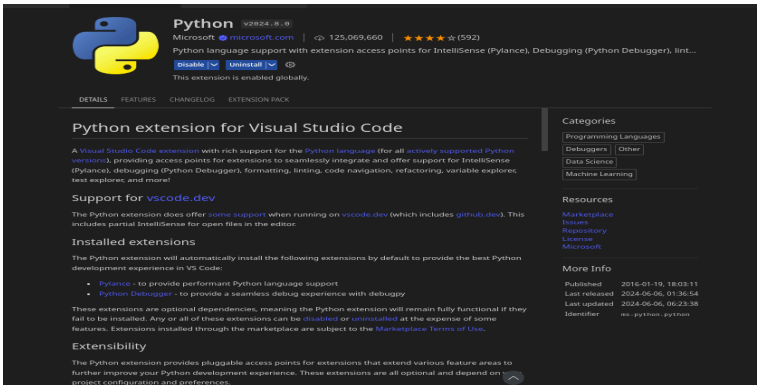
-Github Classroom



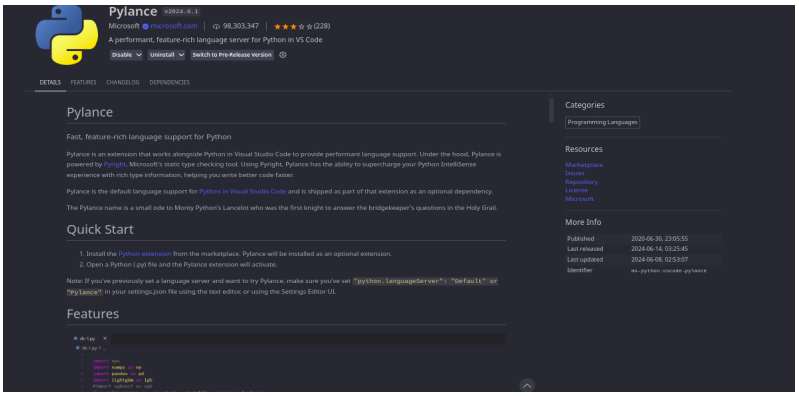
-Github Pull request



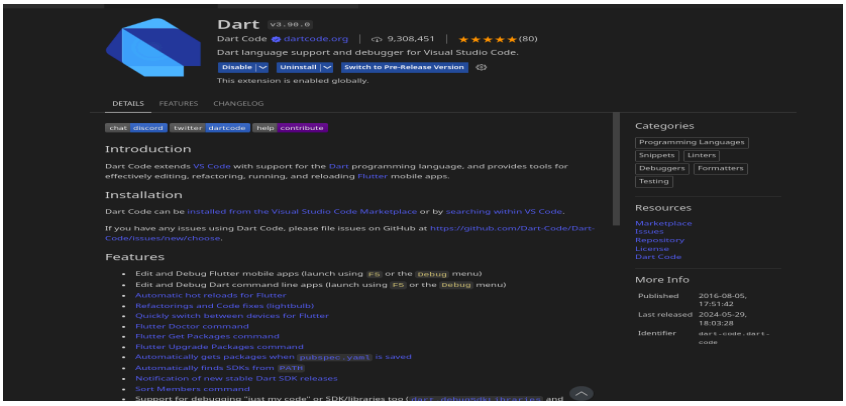
-Python



-Pylance

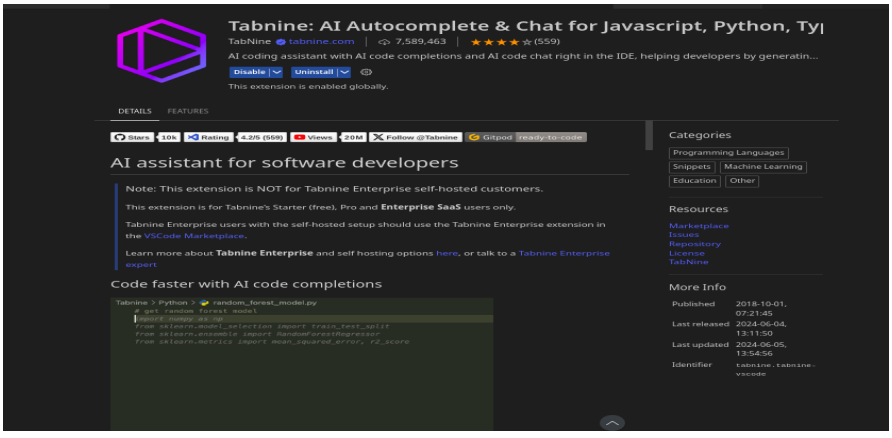


-Dart

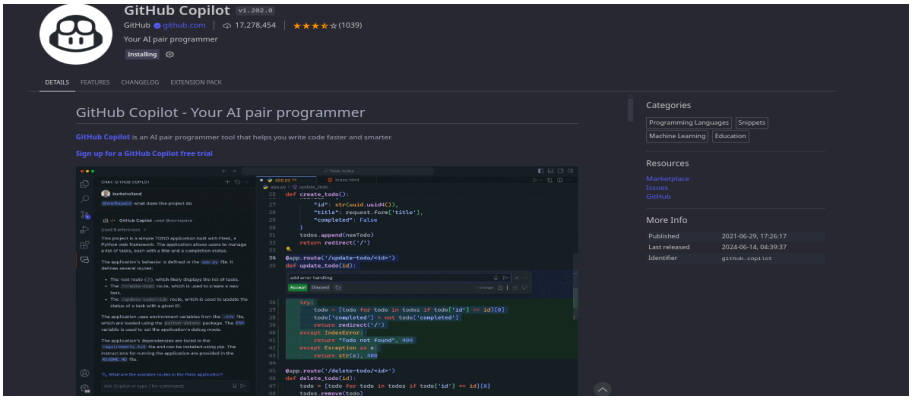


-Tabnine

-Github Copilot



-SQL sever



Challenges and Solutions

Challanges:

User Configuration Errors

- **Challenge:** After installing Git, committing changes failed due to missing user configuration (username and email).

Solution: Configured the user information using:

```
git config --global user.name "My Name"
```

```
git config --global user.email "myemail@gmail.com"
```

Git challenged me in nearly every aspect but I used openAI and the community member to help me overcome them