Lab 3 - Environment Setup

Step 1 : Install Python and UV

- Install Python : Welcome to Python.org
- Install Python Package/Project Manger : Installation | uv
- Install Git : Git - Downloads

Step 2 : Sign up to GitHub and DockerHub

If you do not have accounts on GitHub and DockerHub, sign up at

- GitHub · Build and ship software on a single, collaborative platform
- Docker Hub

Step 3: Install Docker / Rancher Desktop

- If you are using personal machine, install Docker Desktop (Be aware of the licensing terms): Docker Desktop: The #1 Containerization Tool for Developers
- If you are using a company provided machine, I would recommend installing Rancher Desktop which is a open source and free alternative which does not cause any licensing issues : Rancher Desktop by SUSE

Step 4: Setup Development Environment

Fork the project code from :

mlopsbootcamp/house-price-predictor: Sample Machine Learning App for MLOps Learning created by School of Devops.

This (forking) is important as you would be making changes to the code and building your own projects with it, which required you have to write access to the repo.

```
[clone your forked version of the repo]
git clone https://github.com/xxxxx/house-price-predictor.git
```

```
cd house-price-predictor
uv venv --python 3.11
source .venv/bin/activate
python --version

uv pip install -r requirements.txt
```

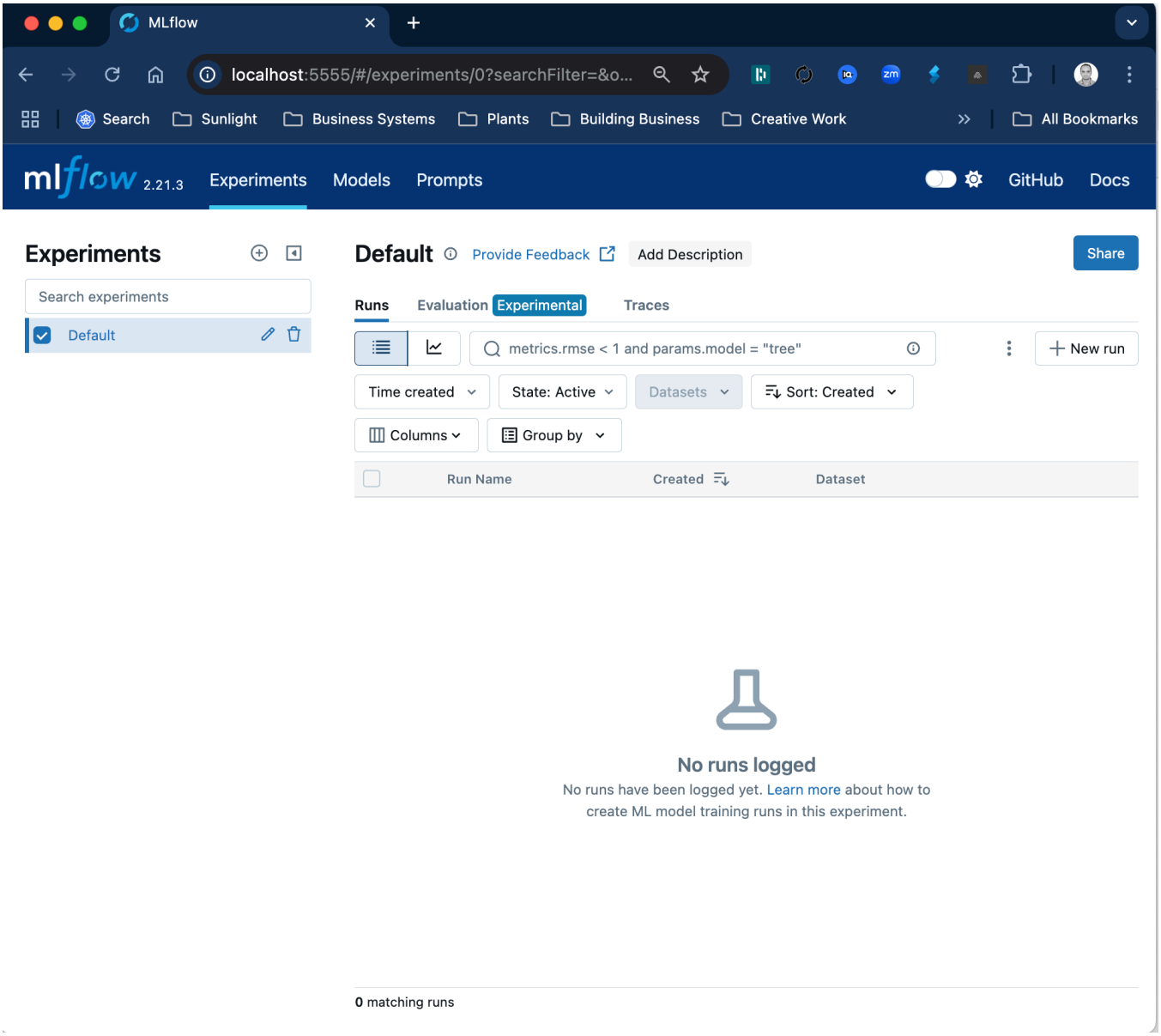
Step 5: Setup MLFlow

```
cd deployment/mlflow
docker compose up -d
docker compose ps
cd ../../
```

[sample output]

```
CONTAINER ID  IMAGE                          COMMAND               CREATED
STATUS        PORTS                    NAMES
dc209d985e2c  ghcr.io/mlflow/mlflow:latest  mlflow server --h...  8 seconds
ago  Up 8 seconds  0.0.0.0:5555->5000/tcp  mlflow-tracking-server
```

Browse to http://localhost:5555/ to access MLFlow Interface.



Thats all. Everything that you need to get started with is set up. We will require kubernetes setup, but we will save the instructions for later.

Step 6: Setup Editor

While its not a must, it would be good to have an editor setup and ready. I would recommend you install Visual Studio Code from the following link.

- Visual Studio Code : https://code.visualstudio.com/

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