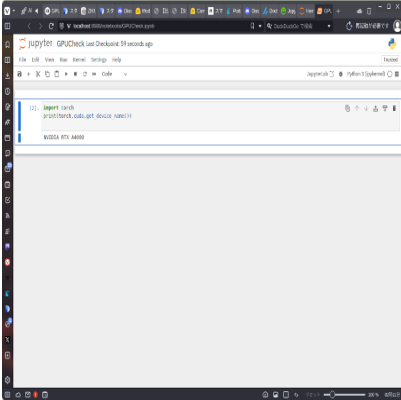




GPUaccelerated Jupyter Notebook on Docker

Description

This project provides a Jupyter Notebook environment with GPU acceleration. The notebook is designed to run on a Docker container, which is configured to use the host's GPU resources. The code in the notebook demonstrates how to import the PyTorch library and check the available GPU device.

The notebook is titled 'Jupyter Notebook on Docker' and contains the following code:

```
import torch
print(torch.cuda.get_device_name())
```

The output of the code is 'CUDA RTX 3080', indicating that the notebook is running on a GPU.

The Dockerfile for this project is located in the 'docker' directory. It defines the base image as 'nvidia/cuda:12.6.0-runtime-ubuntu22.04' and installs the necessary dependencies for running the Jupyter Notebook.

```
$ mkdir jupyter-docker
$ cd jupyter-docker
```

The Dockerfile also includes the following commands:

```
Dockerfile
docker-compose.yml
jupyter_notebook_config.py
notebooks/
requirements.txt
```

The Dockerfile is named 'Dockerfile' and is located in the 'docker' directory.

FROM nvidia/cuda:12.6.0-runtime-ubuntu22.04

```
RUN apt update \
    && apt install -y \
    git\
    python3\
    python3-pip
```

```
RUN apt-get autoremove -y && apt-get clean && \
rm -rf /usr/local/src/*
```

```
WORKDIR /notebooks
```

```
COPY requirements.txt /tmp/
COPY jupyter_notebook_config.py /tmp/
```

```
RUN pip3 install --upgrade pip
RUN pip install --no-cache-dir -r /tmp/requirements.txt
```

CMD ["jupyter", "notebook", "--port", "8888", "--no-browser", "--allow-root", "--con

docker-compose.yml

```
version: "3"
services:
  tensorflow:
    build: .
    runtime: nvidia
    environment:
      - NVIDIA_VISIBLE_DEVICES=all
    volumes:
      - ./notebooks:/notebooks
    ports:
      - 8888:8888
```

jupyter_notebook_config.py

```
c.NotebookApp.ip = '0.0.0.0'
c.NotebookApp.token = 'xxx'
```

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requirements.txt

```
torch
torchvision
torchaudio
tensorflow-gpu
transformers
jupyter
notebook
```

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```
$ mkdir notebooks
```

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```
$ docker compose up
```

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Category

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Tags

- 1. AI
- 2. Docker
- 3. GPU
- 4. Jupyter Notebook
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Date Created

2024å¹10æ??5æ?¥

Author

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