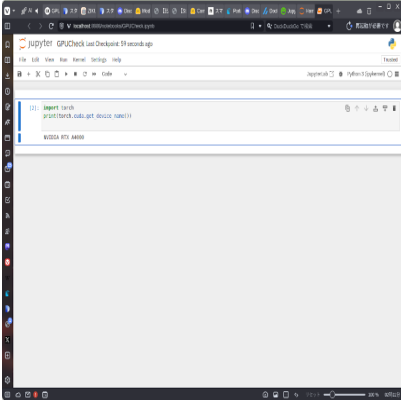




GPU Acceleration with Jupyter Notebook and Docker

Description

This tutorial demonstrates how to run a Jupyter Notebook with GPU acceleration using Docker. The notebook contains the following code:

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

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

The output of the notebook is:

jupyter-docker

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

requirements.txt

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

Dockerfile

```
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
```

Docker composeã³ã??ã³ã??ã•šã³ã³ã??ã??ã??èµ·å??ã?ã¾ã?

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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

kazuo-tsubaki