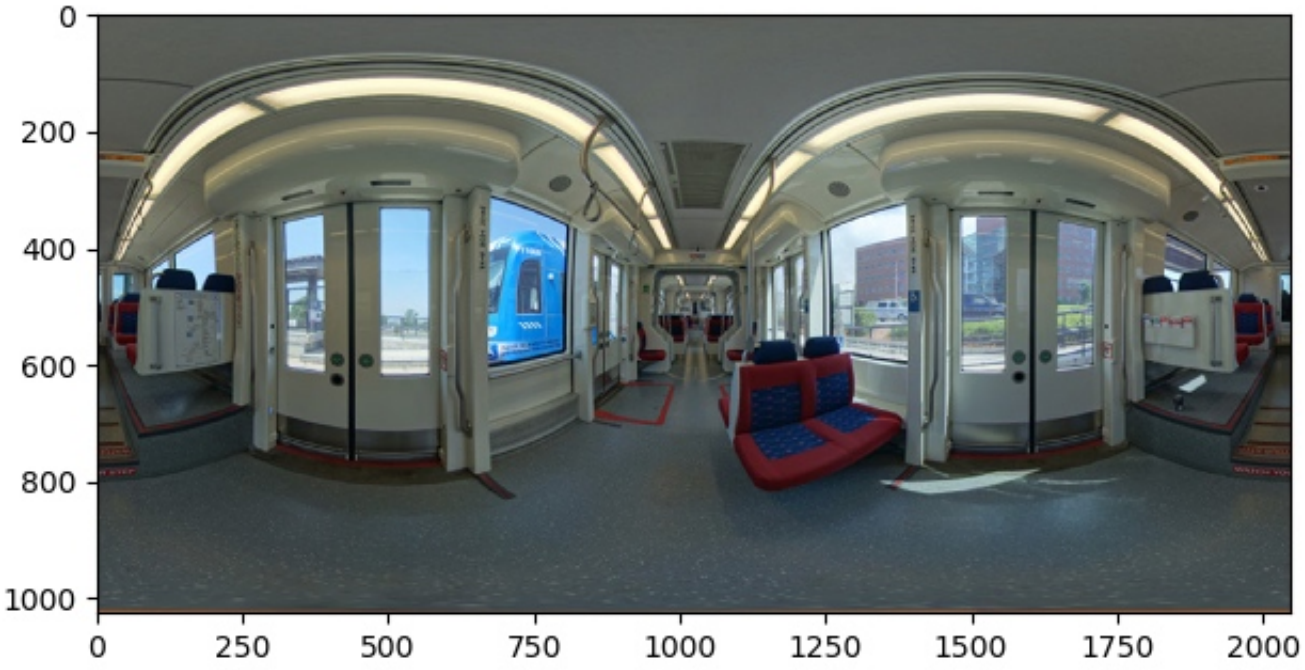
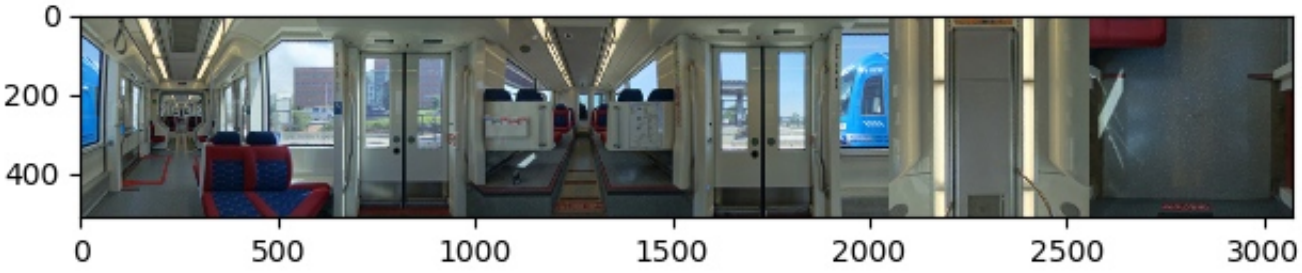
5-21 汇报

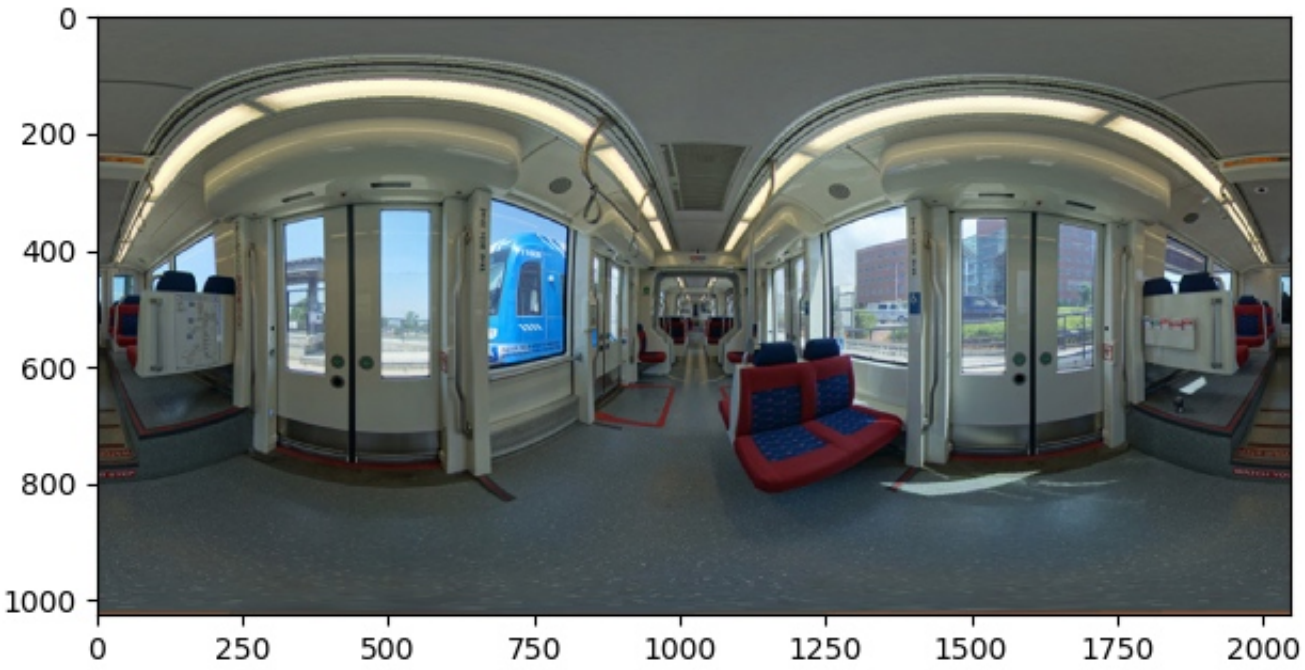
VR视频投影

完成了 `VideoFusionGPU` `VideoProjector`

```
from VideoProjectorGPU.frame import frame_to_horizon
from frame import frame_from_horizon
from PIL import Image
import numpy as np
import matplotlib.pyplot as plt

sample = './sample/001.png'
imgIn = np.array(Image.open(sample))
plt.imshow(imgIn)
plt.show()

f2h = frame_to_horizon(imgIn.shape)
img01 = f2h.render(imgIn)
plt.imshow(img01)
plt.show()

ffh = frame_from_horizon(img01.shape)
img02 = ffh.render(img01)
plt.imshow(img02)
plt.show()
```


0
200
400
600
800
1000
0
250
500
750
1000
1250
1500
1750
2000


0
200
400
0
500
1000
1500
2000
2500
3000



因此可以将视频分6块传输，客户端拼接
使用GPU加速，理论最大速度可以达到拆分160fps/融合200fps（纯内存操作，不显示）

```
from VideoProjectorGPU.frame import frame_to_horizon
from frame import frame_from_horizon
from PIL import Image
import numpy as np
import time

sample = './sample/001.png'
imgIn = np.array(Image.open(sample))
f2h = frame_to_horizon(imgIn.shape)

cnt = 0
start_time = time.time()

while True:
    img01 = f2h.render(imgIn)
    cnt += 1
```

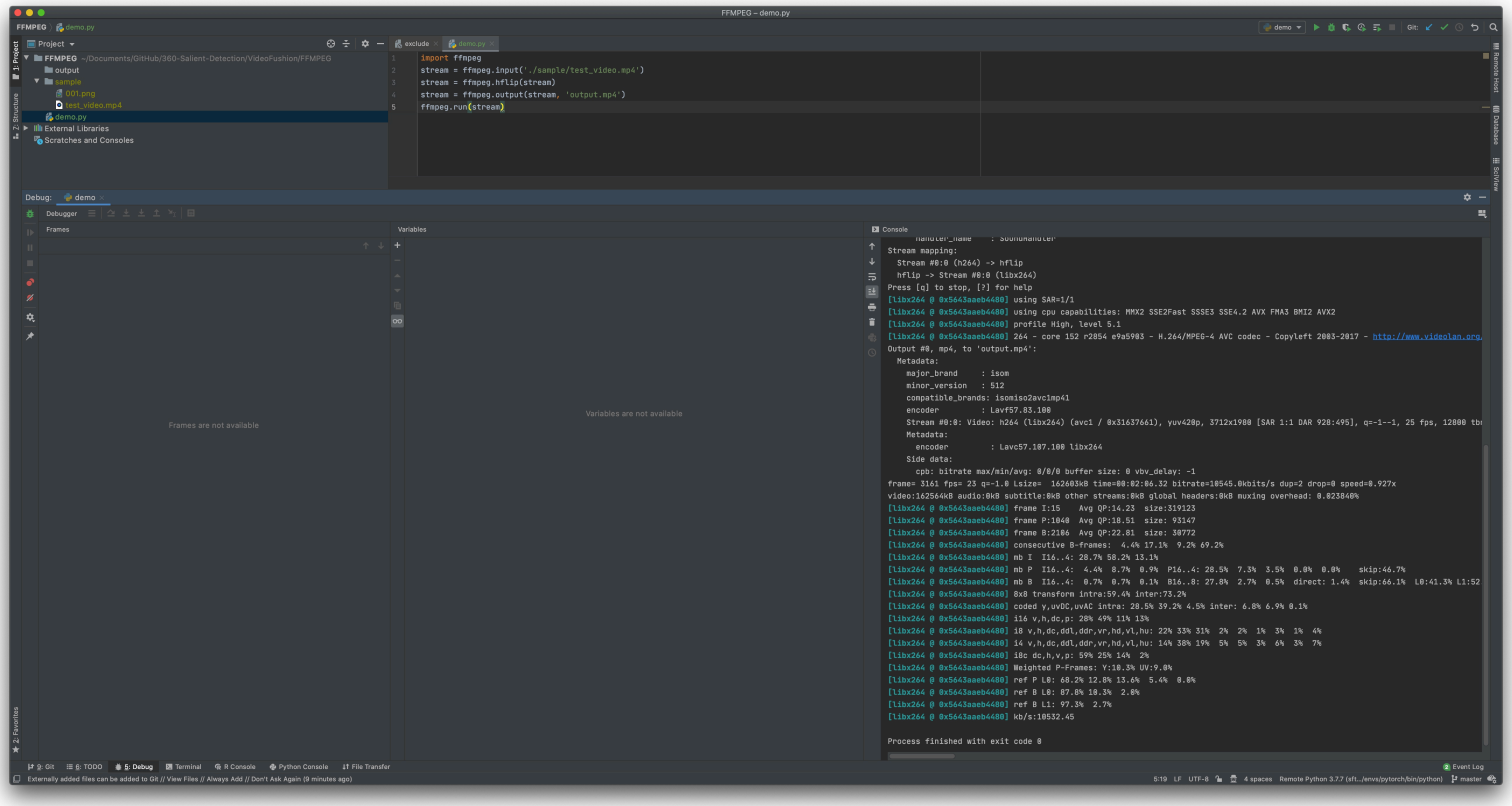
```
    if time.time() - start_time > 1:
        print("FPS: ", cnt / (time.time() - start_time))
        cnt = 0
        start_time = time.time()
```

头部朝向协商系统

- `lstm_server.py` 用flask包装并实现的一个restful api
- `server.py` 接受client上传的信号，每六十个合并一组，调用LSTM API
- `client.py` 每秒向发送三十次伪造的头部朝向信息

server 和 client使用了多进程解耦收发操作
lstm_server 也可以使用WSGI进行包装实现并发

目前正在研究FFMPEG英伟达解码器



https://github.com/NVIDIA/VideoProcessingFramework