Train Model 종류 변경하여 비교해보기

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길다영

https://velog.io/@arittung/3D-Room-Reconstruction-Using-HorizonNet-Network-%EC%A2%85%EB%A5%98-%EB%8B%A4%EB%A5%B4%EA%B2%8C-%ED%95%B4%EA%B0%80%EB%A9%B4%EC%84%9C-%EB%B9%84%EA%B5%90 참고.

https://github.com/sunset1995/HorizonNet 참고.

Contents

1 Trained Model 종류

- Trained Model 종류
- 입력 이미지

1 Trained Model 종류

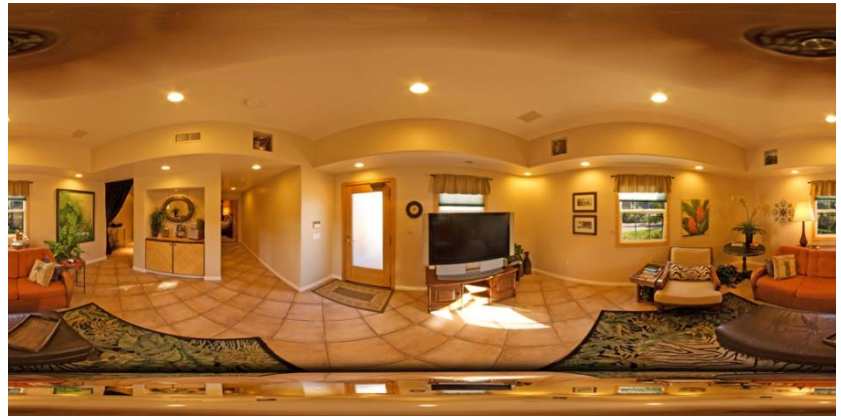
- Panos2d3d.pth
- st3d.pth

자세한 내용은 https://velog.io/@arittung/3D-Room-Reconstruction-Using-HorizonNet-Dataset-panos2d3d-st3d 참고.

1 Network 종류와 기본 설정 - 입력 이미지

Pano_01.png

Pano_07.png



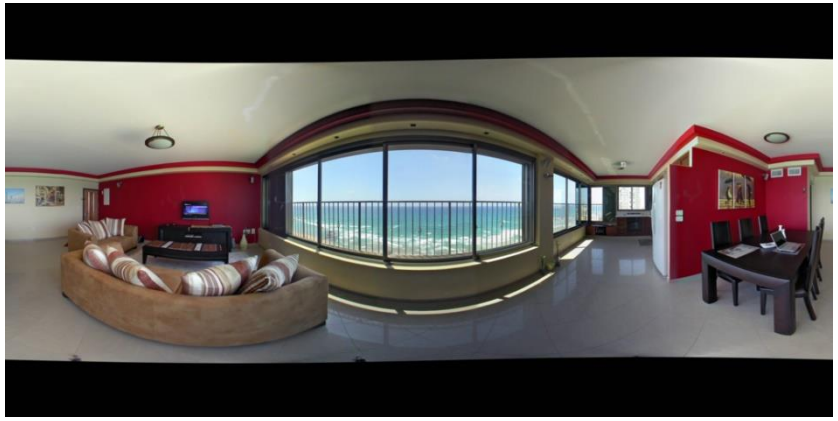
Pano_13.png

Pano_15.png

Pano_18.png

Pano_20.png

1 Network 종류와 기본 설정 - 입력 이미지



Pano_08.png

Pano_21.png

Pano_22.png

Pano_23.png

Pano_24.png

2 결과 분석

- 결과 분석
- 결과 비교

2 결과 분석 - 결과 분석

- 확실히 panos2d3d.pth보다 st3d.pth가 훨씬 성능이 좋았다.

🤔 왜까..?

Panos2d3d 는 300epoch로 trained된 반면 st3d는 50epoch로 trained 되었는데도 st3d가 좋음.

🧐 내가 생각하는 이유

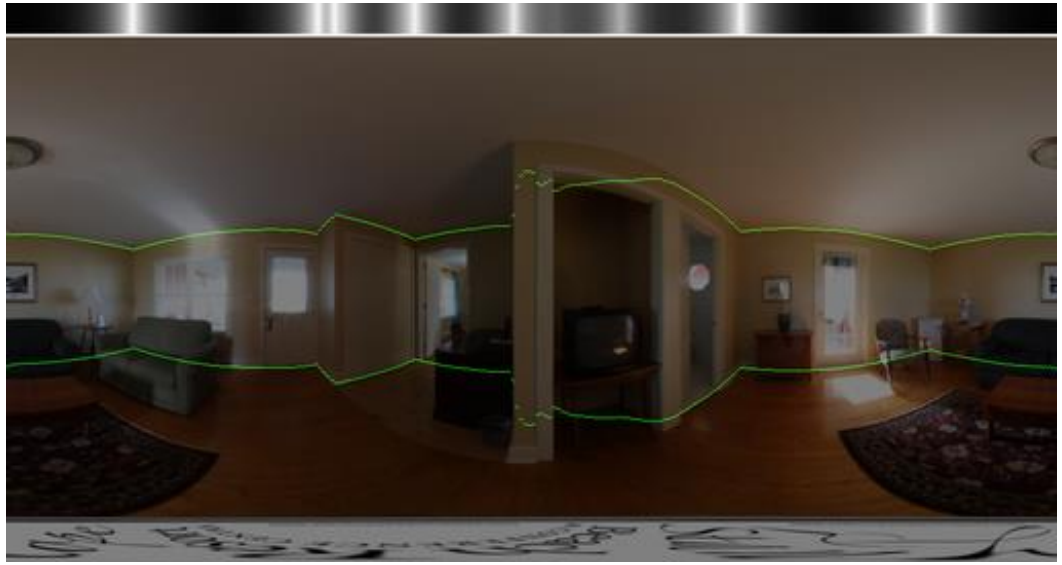
① 검증 세트에서 Loss function에 따라 50th epoch를 선택

② 원래 가구와 빛의 세팅을 가진 이미지를 트레이닝 시켜서.. → 그렇담 panos2d3d는 이렇게 트레이닝 시키지 않은건가?

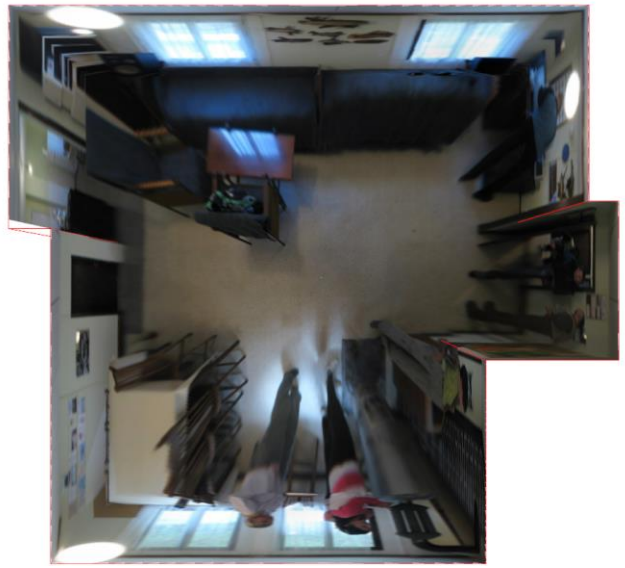
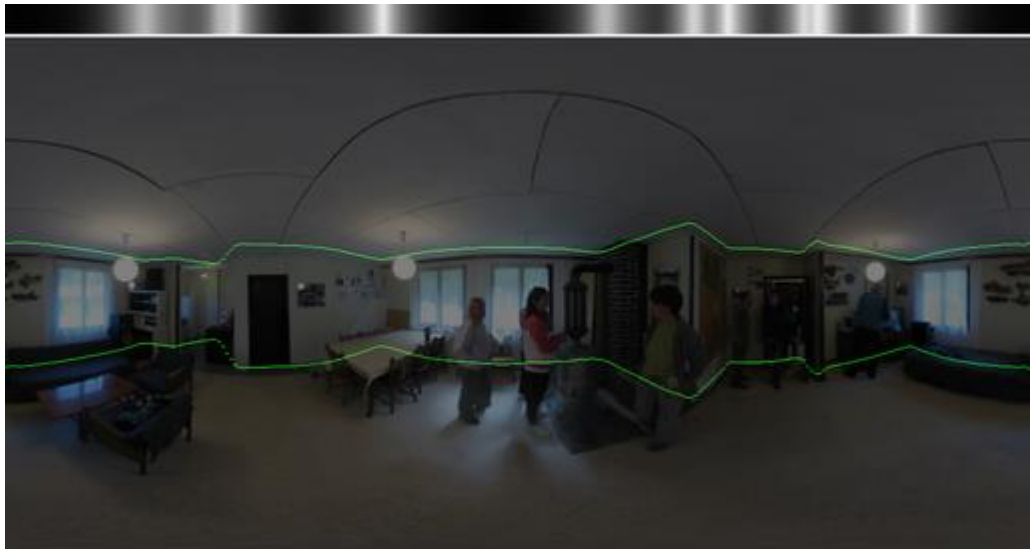
'retrained Models

- resnet50_rnn__panos2d3d.pth
  - Trained on PanoContext/Stanford2d3d 817 pano images.
  - Trained for 300 epoch
- resnet50_rnn__st3d.pth
  - Trained on Structured3D 18362 pano images with setting of original furniture and lighting.
  - Trained for 50 epoch.
  - Select 50th epoch according to loss function on validation set.

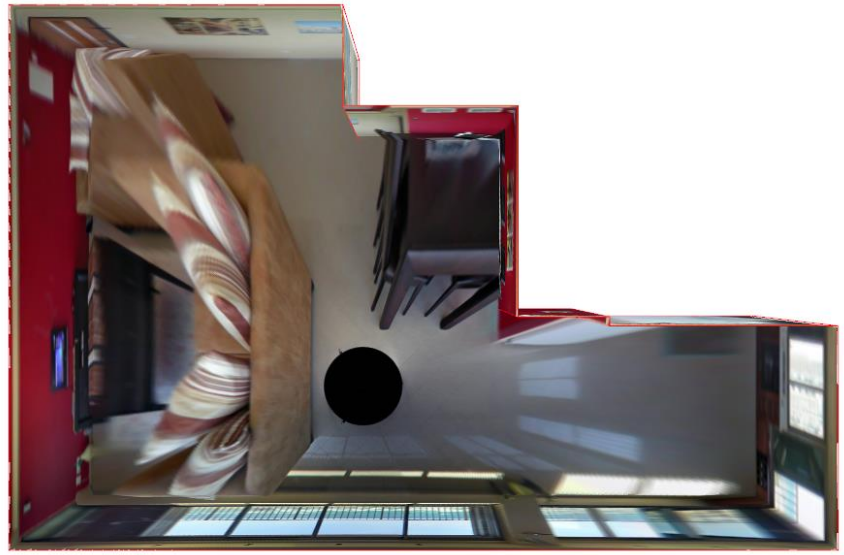
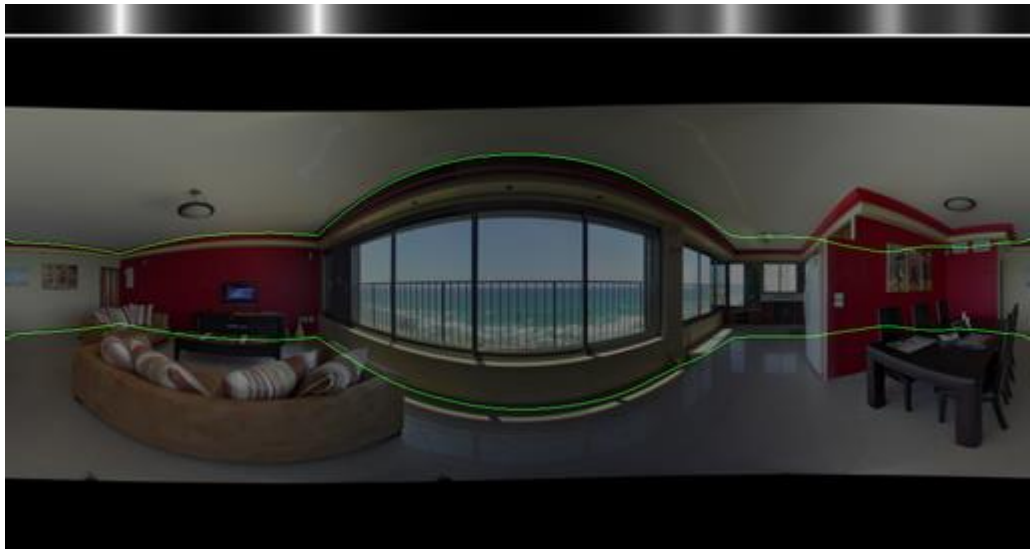
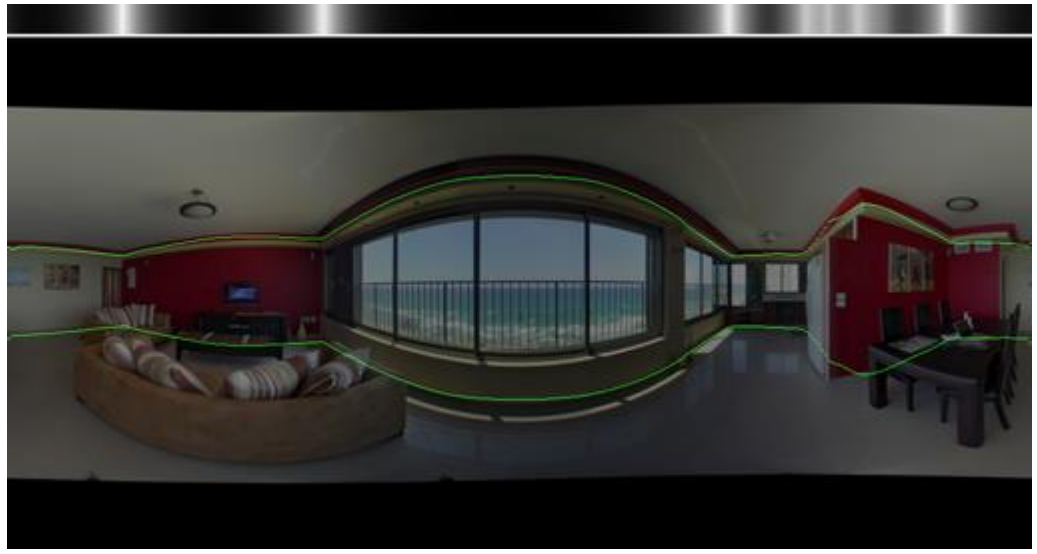
2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_01		
		

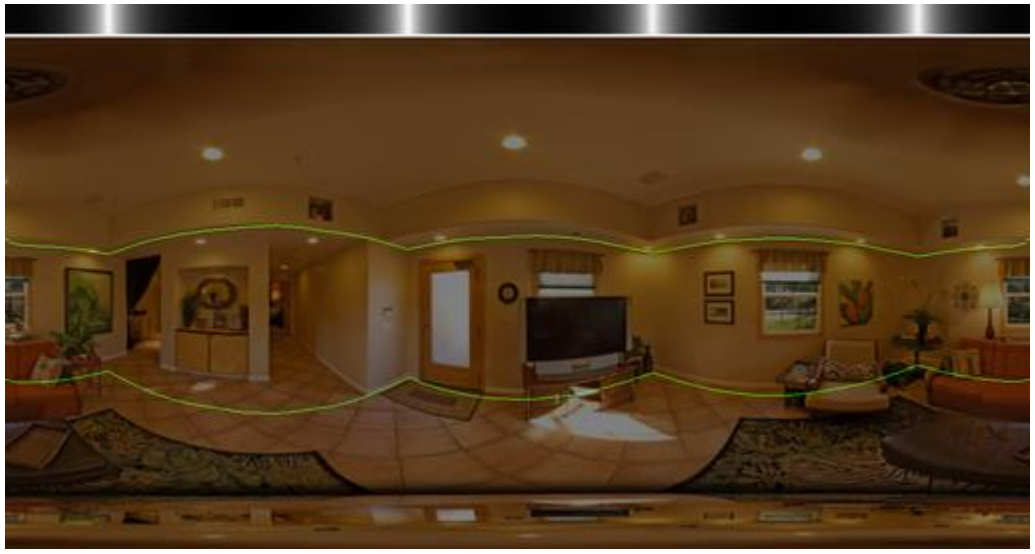
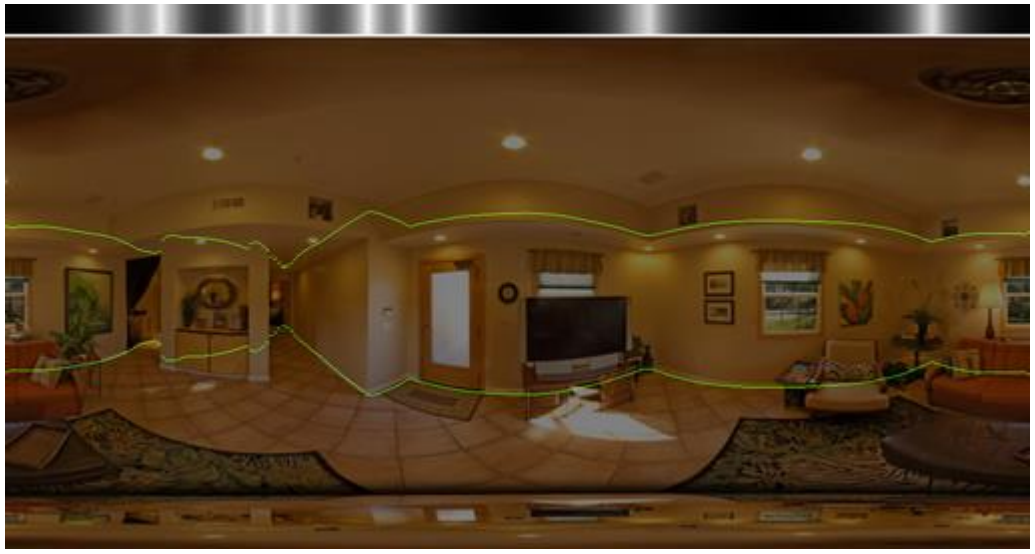
2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_07		
		

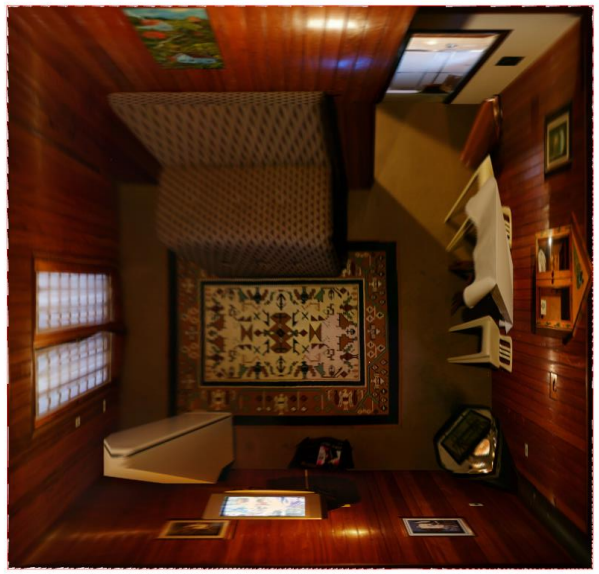
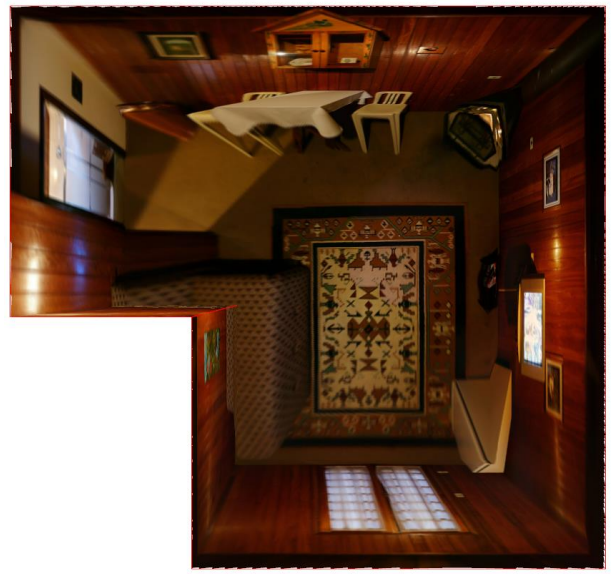
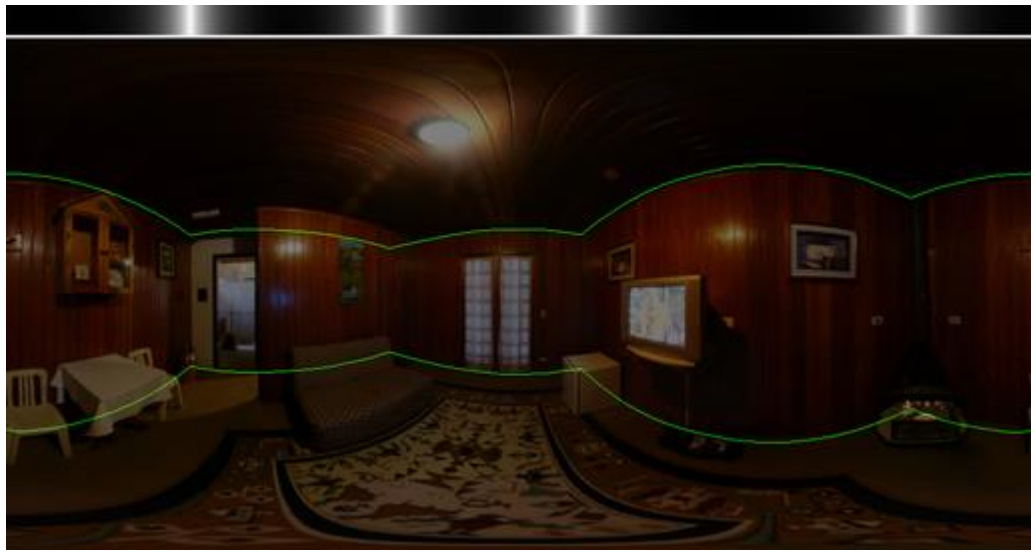
2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_08		
		

2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_13		
		

2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_14		
		

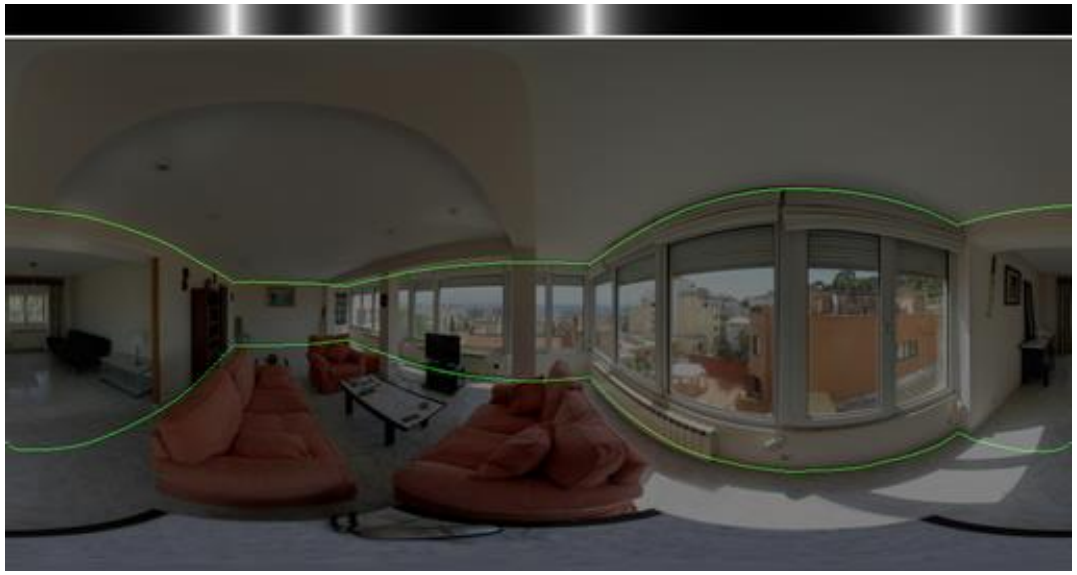
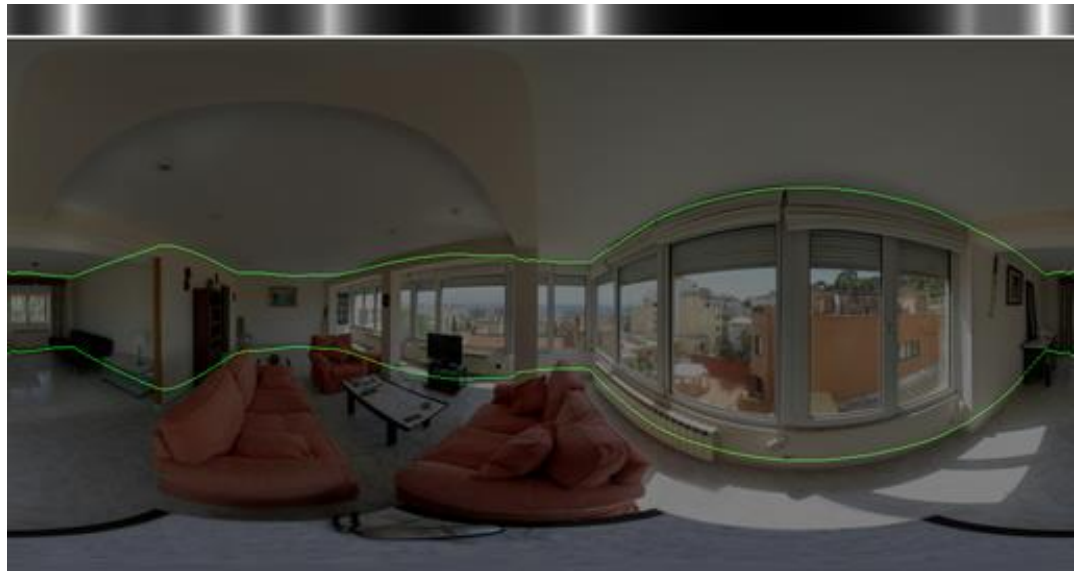
2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_15		
		

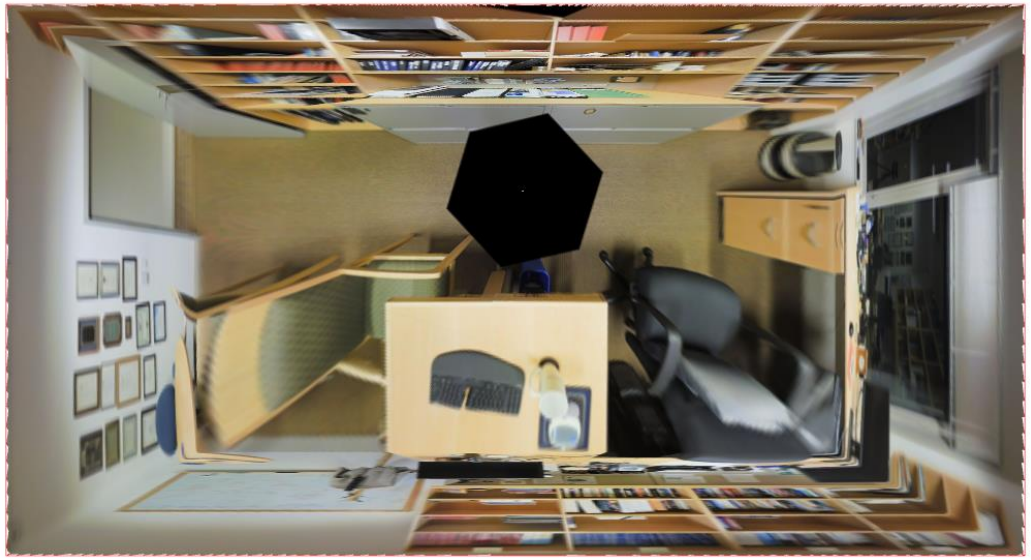
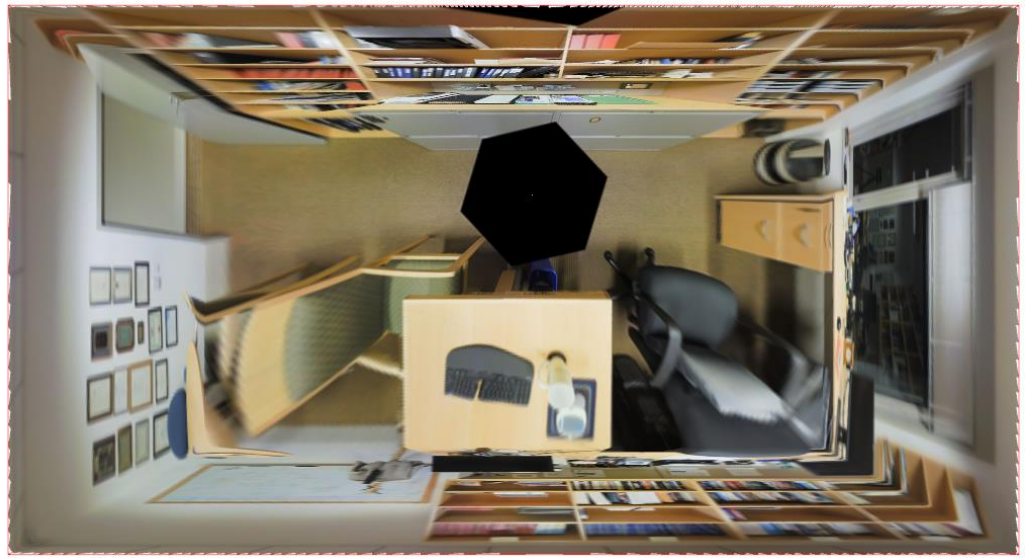
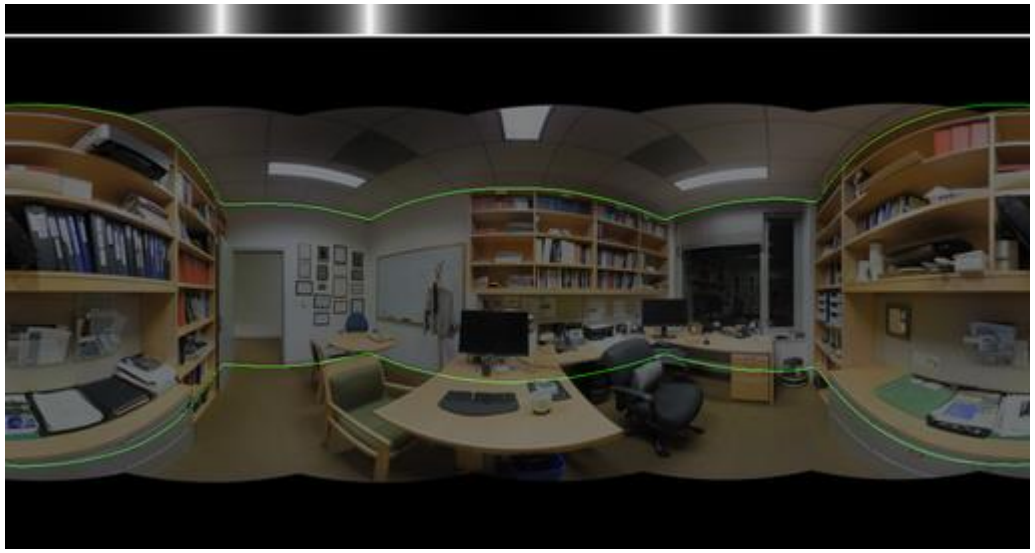
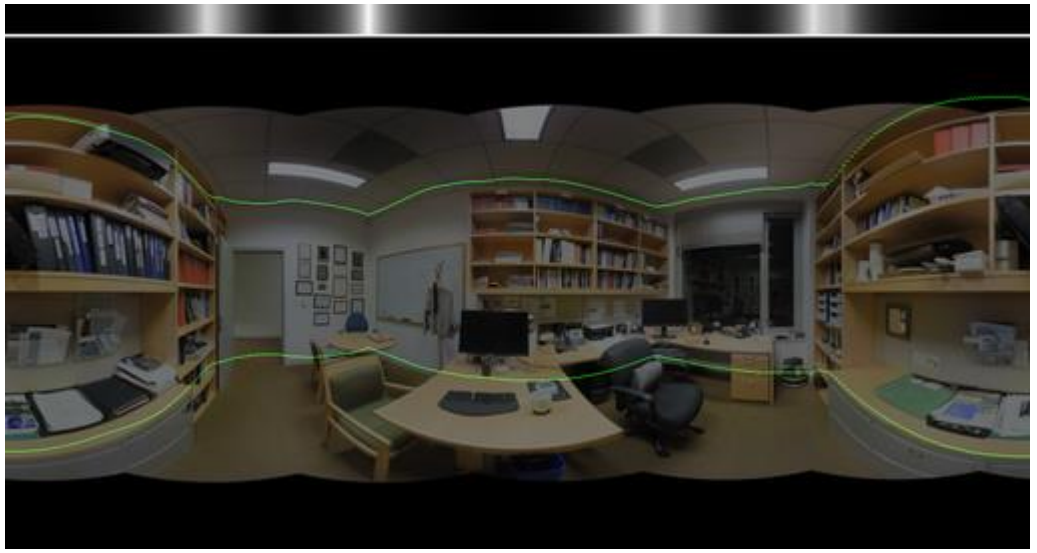
2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_18		
		

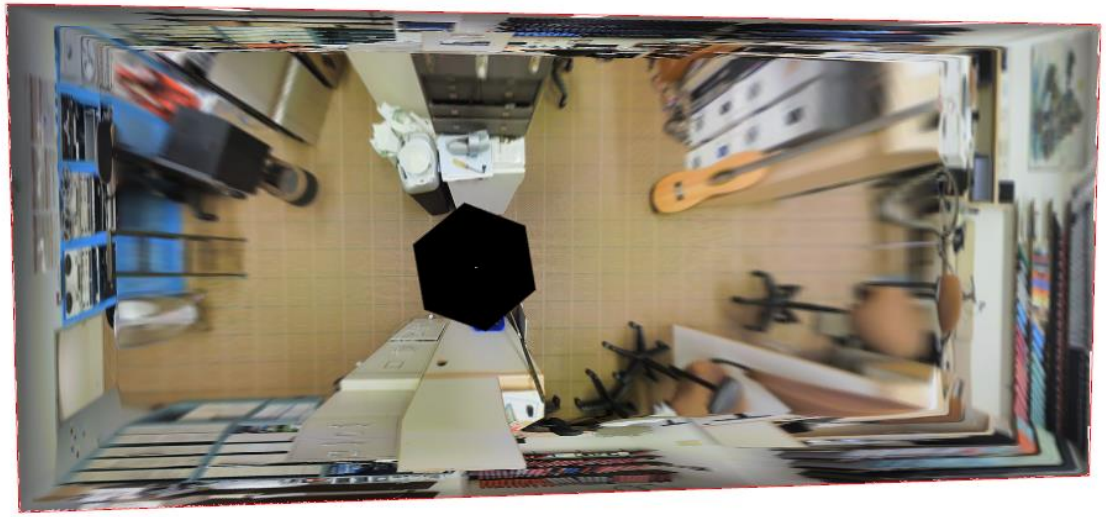
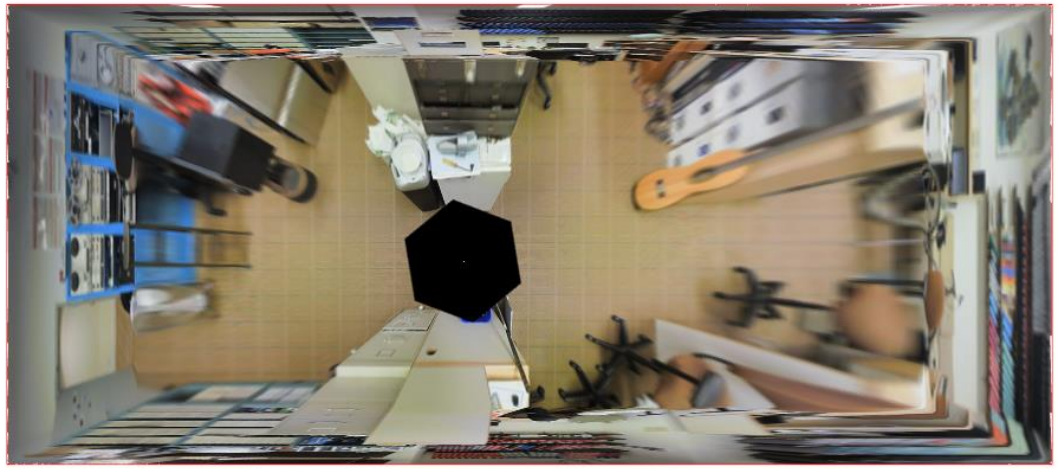
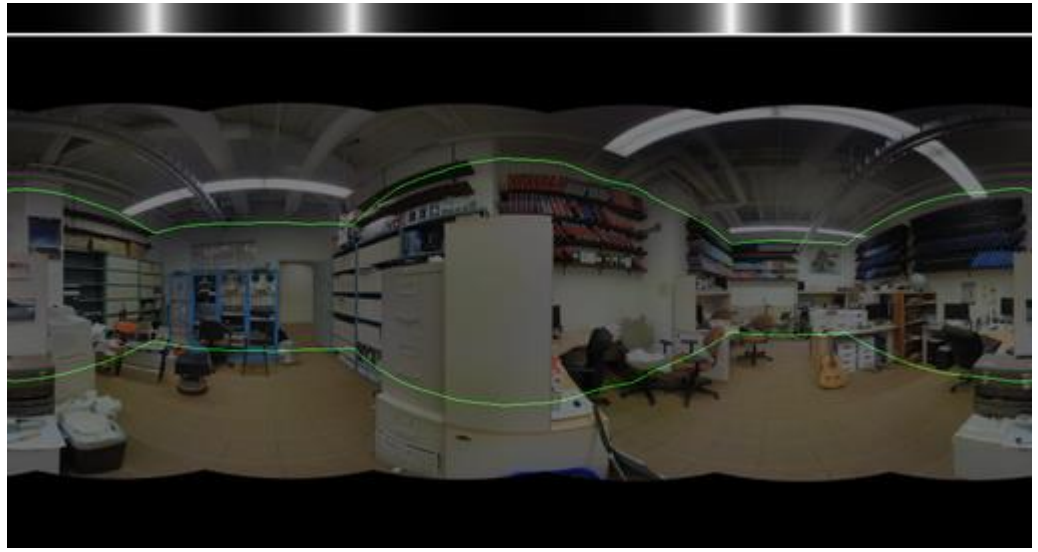
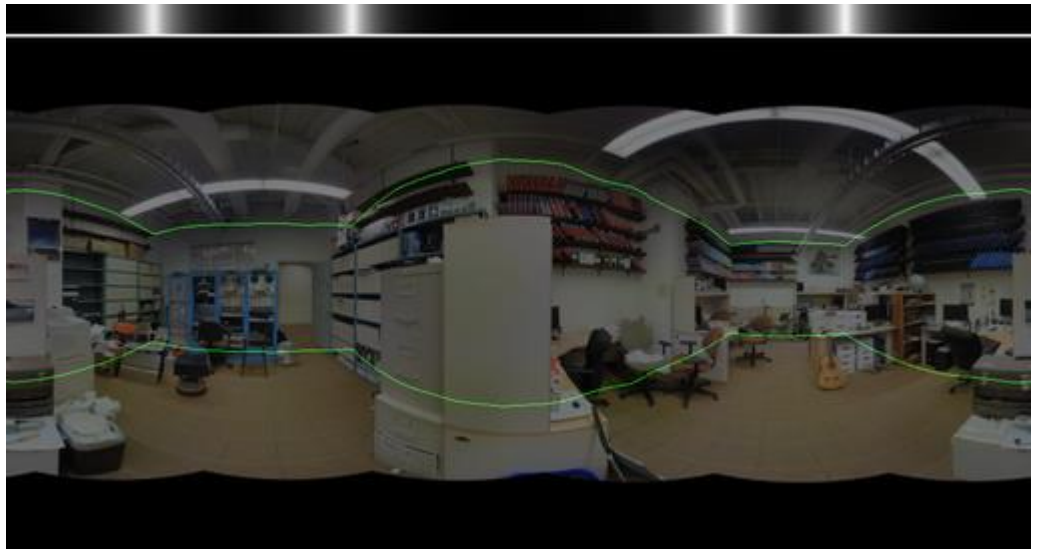
2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_20		
		

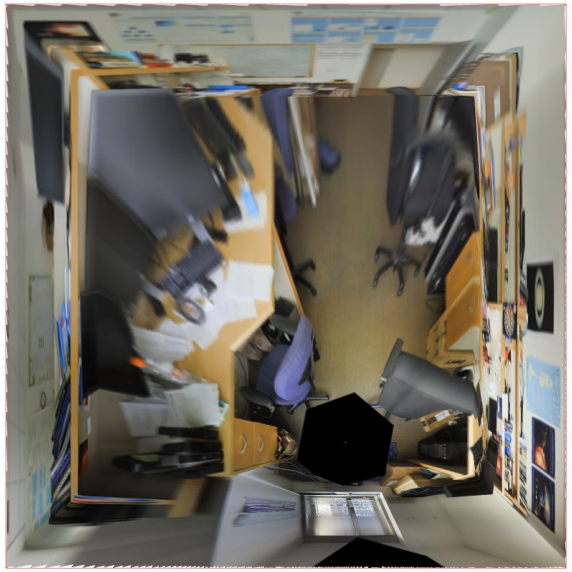
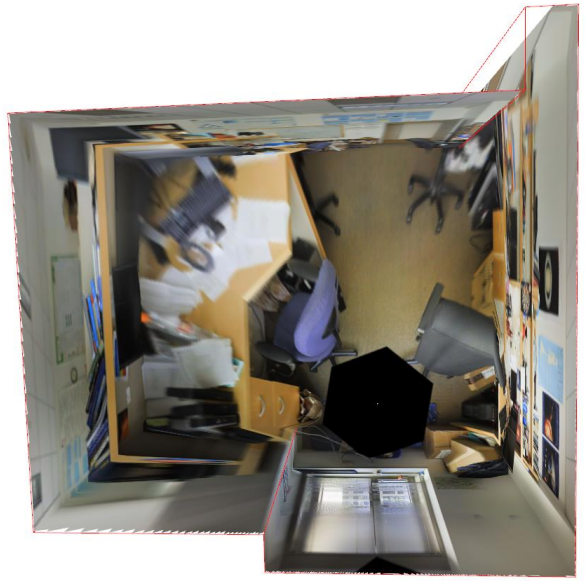
2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_21		
		

2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_22		
		

2 결과 분석 - 결과 비교

Img _name	Panos2d3d.pth	St3d.pth
Pano_23		
		

2 결과 분석 - 결과 비교

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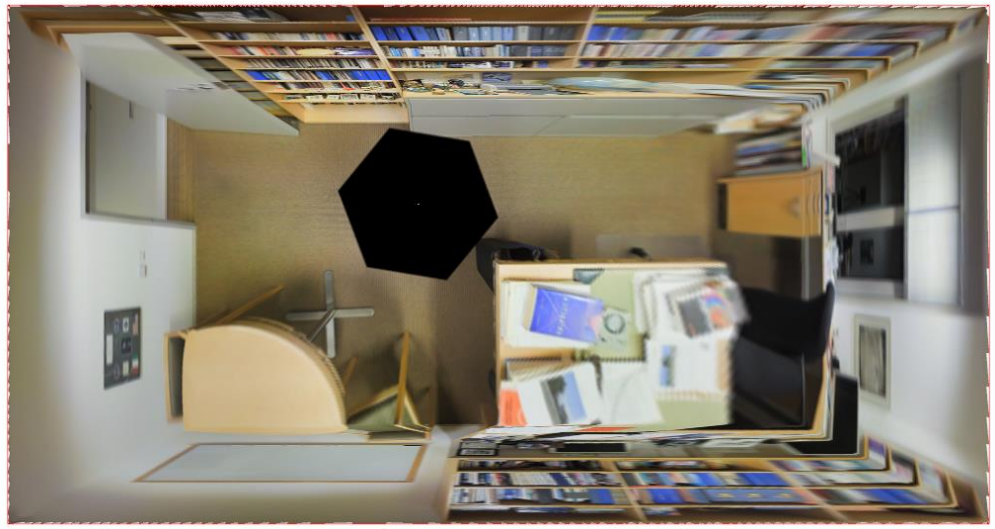
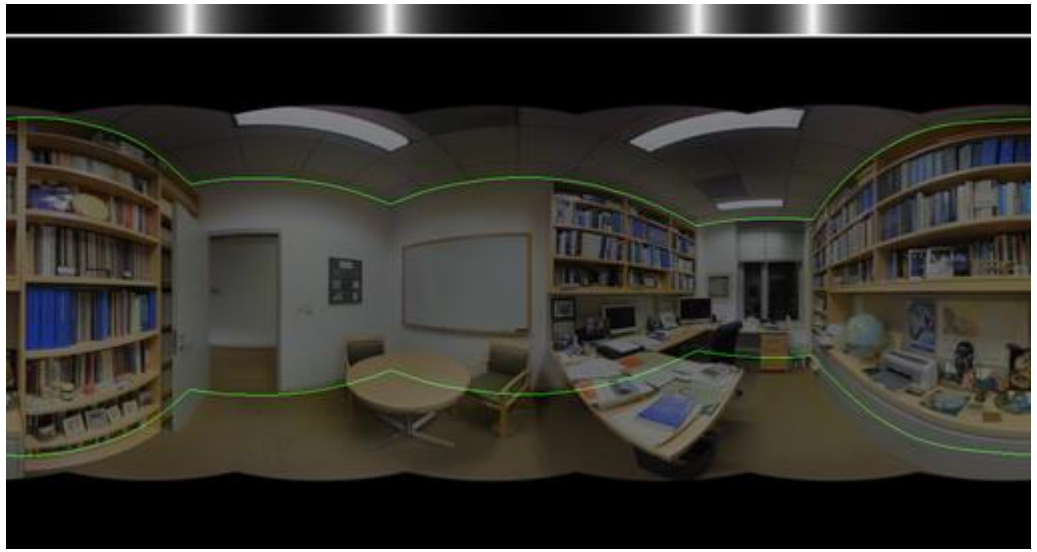
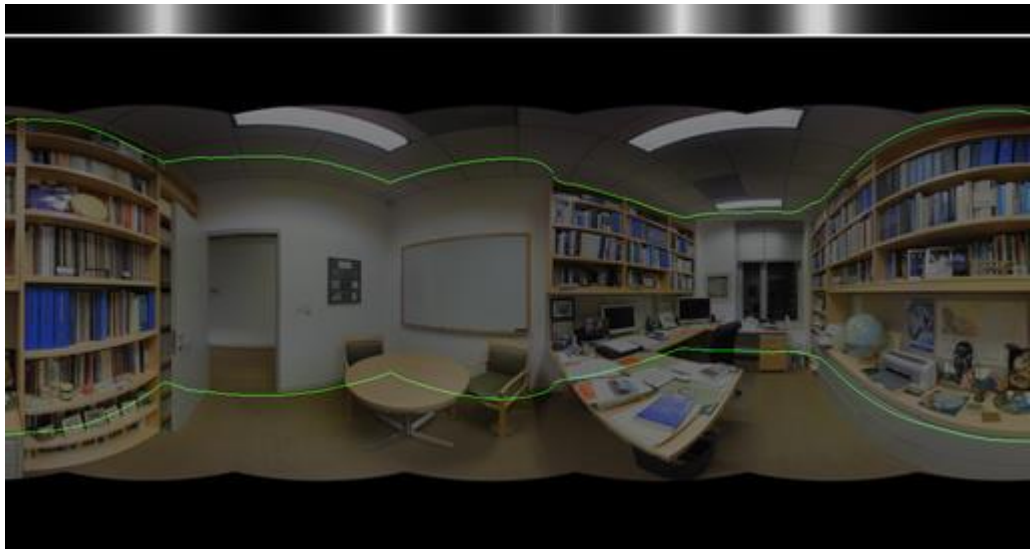
Pano_24		
		

THANK YOU

The End