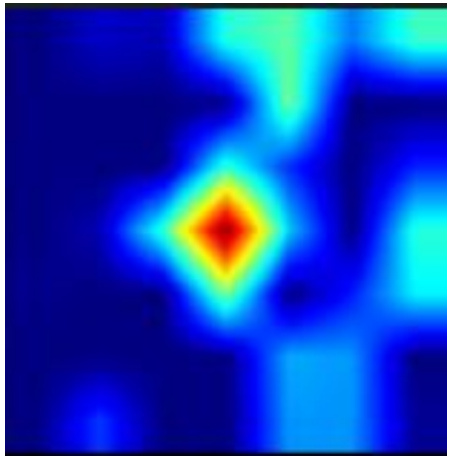
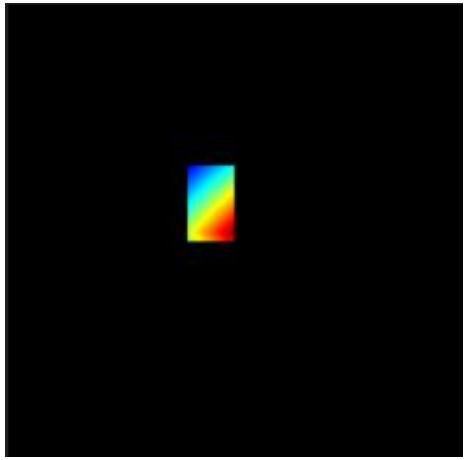
meeting 7

Grad-Cam

[테스트]
파일명: 14782432 - hv 제거 완_1.jpg
Attention sum: 1418.666748046875
Attention sum/전체 : 0.01821477358490187 4
DB_Xray/test/0폴더 Attention sum_avg: 1453.8582112630208
DB_Xray/test/0폴더 Attention sum/전체: 0.017837948143828507

$$Score_{EPG} = \frac{\sum L^c_{(i,j)\in bbox}}{\sum L^c_{(i,j)\in bbox} + \sum L^c_{(i,j)\notin bbox}}$$

The proportion of energy contained in the ground-truth object bounding box over the whole energy of the attribution map.

Q. p/(1-p) 한번에 비교 VS p와 (1-p) 각각 추출

model	MAE		proxy-task	ACC	AUC
densenet121	ImageNet				
	chest x-ray (random)		image_rotation	0.802	0.8529
			jigsaw_puzzle	0.763	0.8565
				0.727	0.819
		shoulder x-ray (random)		0.768	0.848
		shoulder x-ray (80%center)		0.768	0.848
ViT-small	ImageNet				
	chest x-ray (random)		image_rotation	0.715	0.7665
			jigsaw_puzzle	0.715	0.7665
				0.756	0.842
		shoulder x-ray (random)			
		shoulder x-ray (center)			

어깨 X-ray ViT random crop : pretraining 완료
Proxy ViT : 성능 완료 but 나중에 한 번 더

어깨 X-ray center crop : 구현 방식 논의 필요

	proxy epoch	best AUC	best Accuracy
RandomResizedCrop +ImageRotation +Normalize	10	0.7665	71.50%
	20	0.767	70.00%
	30	0.7441	70.50%
	40	0.7471	71.00%
	50	0.7455	71.50%
	60		
	70		
	80		

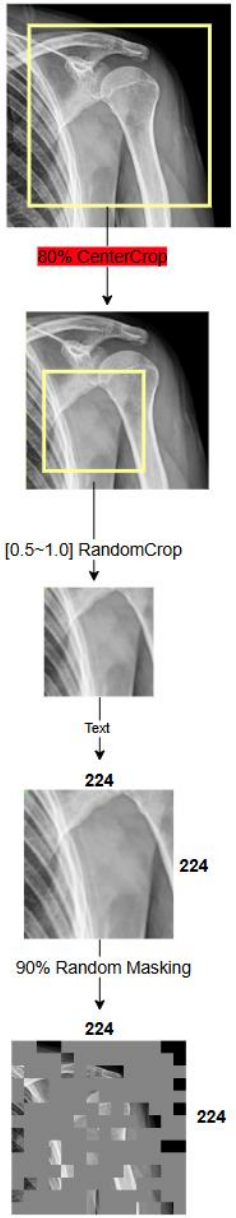
	proxy epoch	best AUC	best Accuracy
RandomResizedCrop +ImageRotation +flip +Normalize	10	0.7665	71.50%
	20	0.767	70.00%
	30	0.7439	70.50%
	40	0.7471	71.00%
	50	0.7452	71.50%
	60		
	70		
	80		

KCC 전 구현 방식

CenterCrop

+ RandomCrop

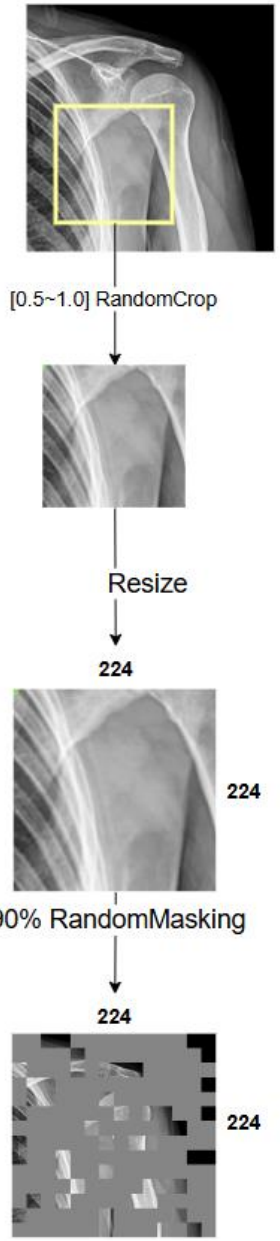
+ Random Masking



논문 방식

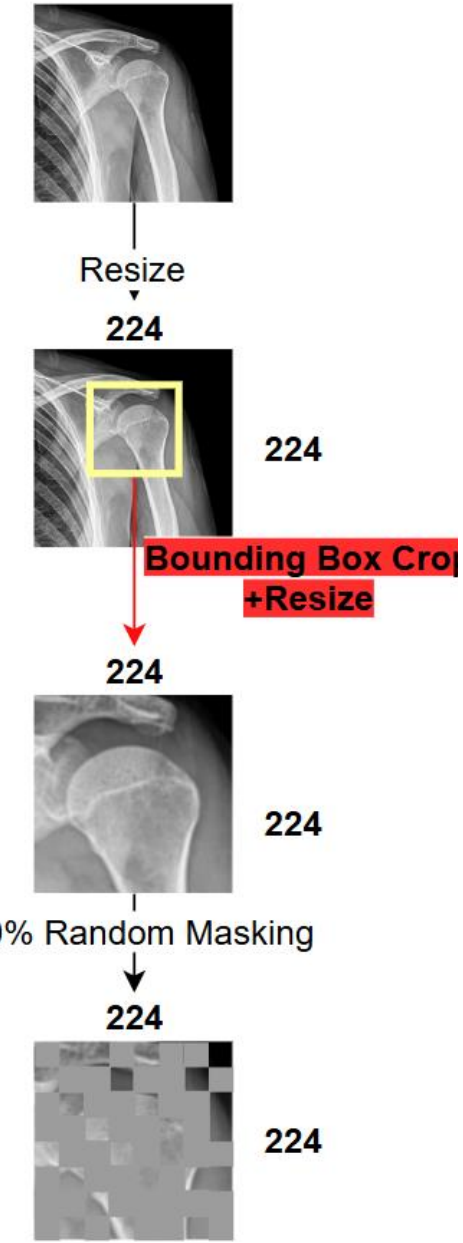
RandomCrop

+ RandomMasking

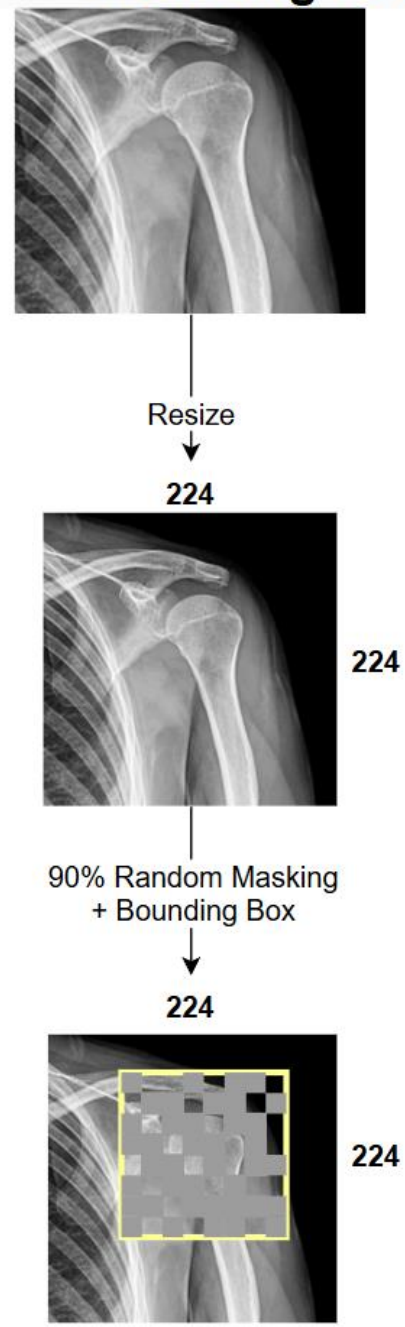


1. Bounding Box Crop

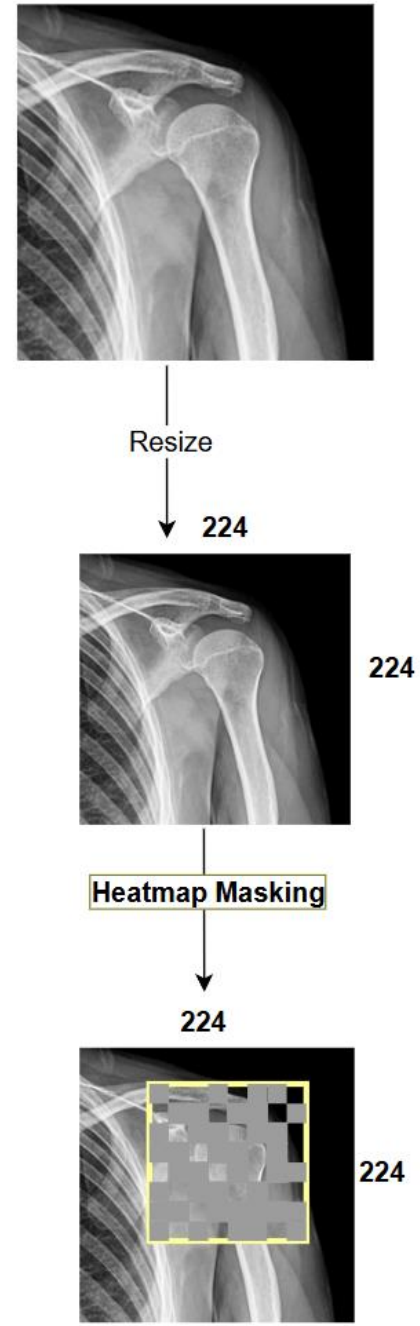
+ Random Masking



2. Random Masking in Bounding Box



3. Heapmap Masking



질문사항

- 만약 Heatmap을 사용한다면, 그 weight은?

1. Centercrop : 논문, 2, 3방법
2. 3방법은 0,1로
3. 3방법은 box 외부를 0이 아닌 최솟값으로
4. Bounding box가 너무 작은 경우, 1.5배 해서 진행
5. Grad cam은 p하나로
6. Grad Cam heatmap은 threshold굳이 안 해도 경향성은 비슷, 상대적인 값으로 비교하니까