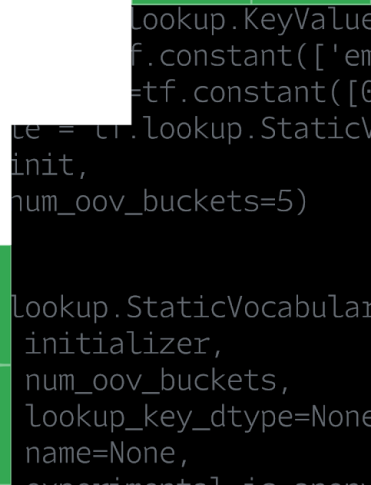
Google Developer Student Clubs

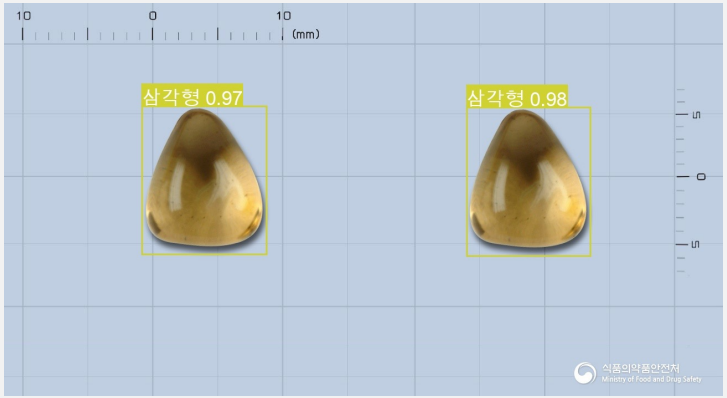
7주차 Mini project

Advanced



모양 분류

모양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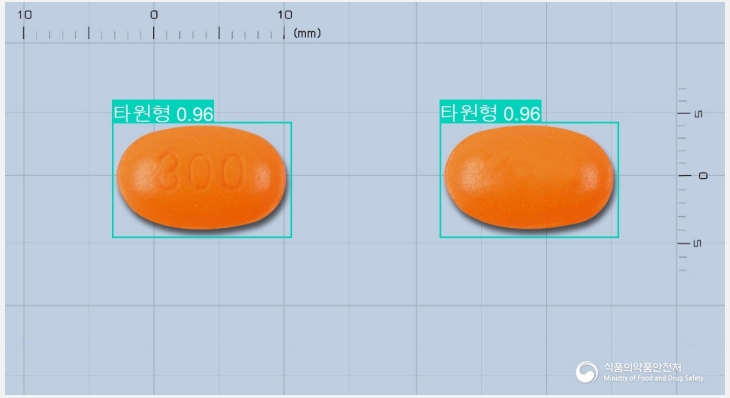
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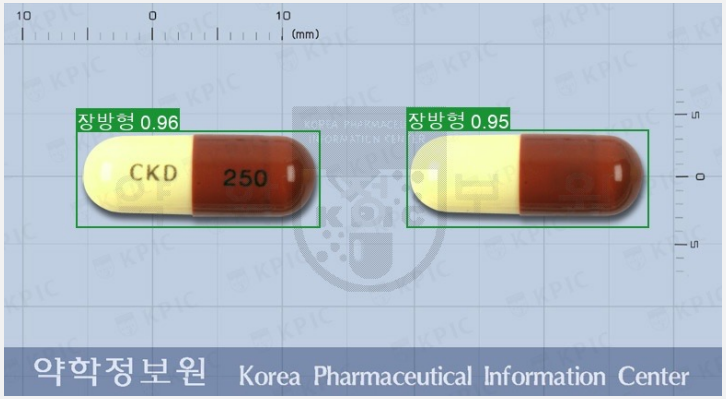
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장방형 0.95
CKD
250
약학정보원 Korea Pharmaceutical Information Center


원형 0.95
원형 0.96

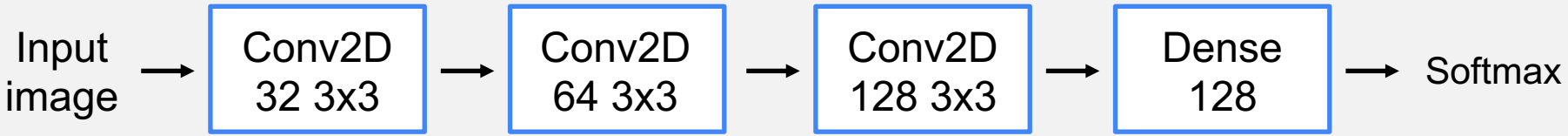
색 분류

색상

1. 전처리

   스케일 변경, Augmentation(trainset만) …

2. CNN 모델



3. 결과

   Accuracy 0.9

색상

여러가지 색은?

- 일단 두 종류 인식까지에 집중
- sobel, GrabCut, Grad-CAM 등으로 각 부분 검출

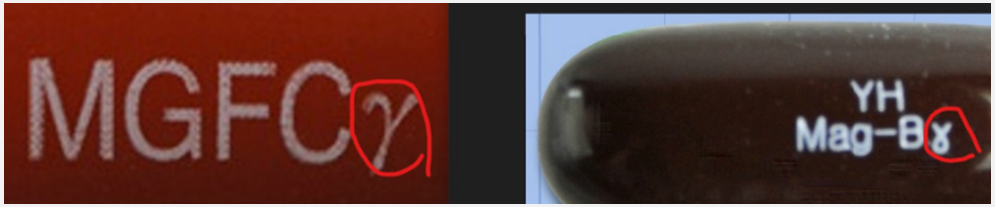
- clustering, 색상 변환, 모델에 학습

텍스트 인식

문제: 특수문자

일부 특수문자를 삭제/치환

- (\ % : <
- ° ¢
- ∪, α, γ

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ClovaAI deep-text-recognition-benchmark: OCR 딥러딩 모델 학습

Ground Truth	Prediction	Confidence Score & T/F	
		0.0000	True
80	80	1.0000	True
		0.0000	True
t	t	1.0000	True
오프코프	오프코프	0.2992	True

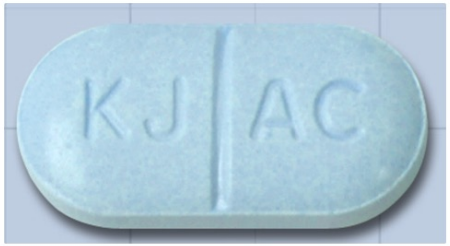
Ground Truth	Prediction	Confidence Score & T/F	
ㅅ	ㅅ	1.0000	True
디퓨텐	덴티콜	0.0663	False
aricept	arccept	0.2386	False
		0.0000	True
		0.0000	True

Ground Truth	Prediction	Confidence Score & T/F	
루마콘300	로아콜300	0.0034	False
851	851	0.9999	True
hds	hds	1.0000	True
dwb	dwb	0.9999	True
ke20	ke20	0.9599	True

Special token 모두 제외 후 accuracy 0.89

문제: 전처리

contrast 있는 게 나음

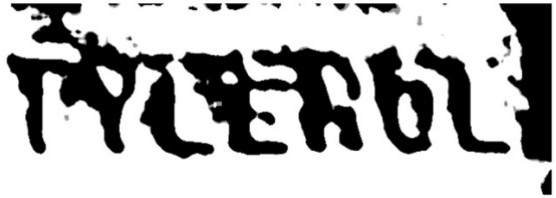


199500305_surface_engraved_1.png
result from thresh of 130,255 and kernel of 5, contrast False.
predicted text: 4

199500305_surface_engraved.png
result from thresh of 130,255 and kernel of 15, contrast True.
predicted text: Ka

contrast 없는 게 나음

result from thresh of 150,255 and kernel of 15, contrast True.
predicted text: EERTY



result from thresh of 150,255 and kernel of 5, contrast False.
predicted text:

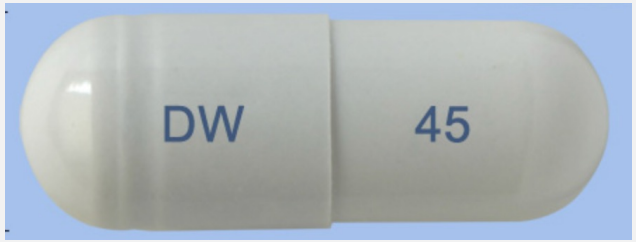
TYLEROL

문제: 전처리

알약의	contrast: 있다	contrast: 없다
왼쪽	199500305_surface_engraved_1.png result from thresh of 130,255 and kernel of 15, contrast True. predicted text: Ka 	199500305_surface_engraved_1.png result from thresh of 130,255 and kernel of 5, contrast False. predicted text: 4 
오른쪽	199500305_surface_engraved_@.png result from thresh of 150,255 and kernel of 5, contrast True. predicted text: AC 	199500305_surface_engraved_@.png result from thresh of 90,255 and kernel of 5, contrast False. predicted text: ACE 

전처리 적용 기준을 ***representation learning***?

기타 문제



인식 결과: PRE

인식 결과: 0W

기타 문제

TYLENOL → TYLEROL

DW → 0W

RNQ → RNG