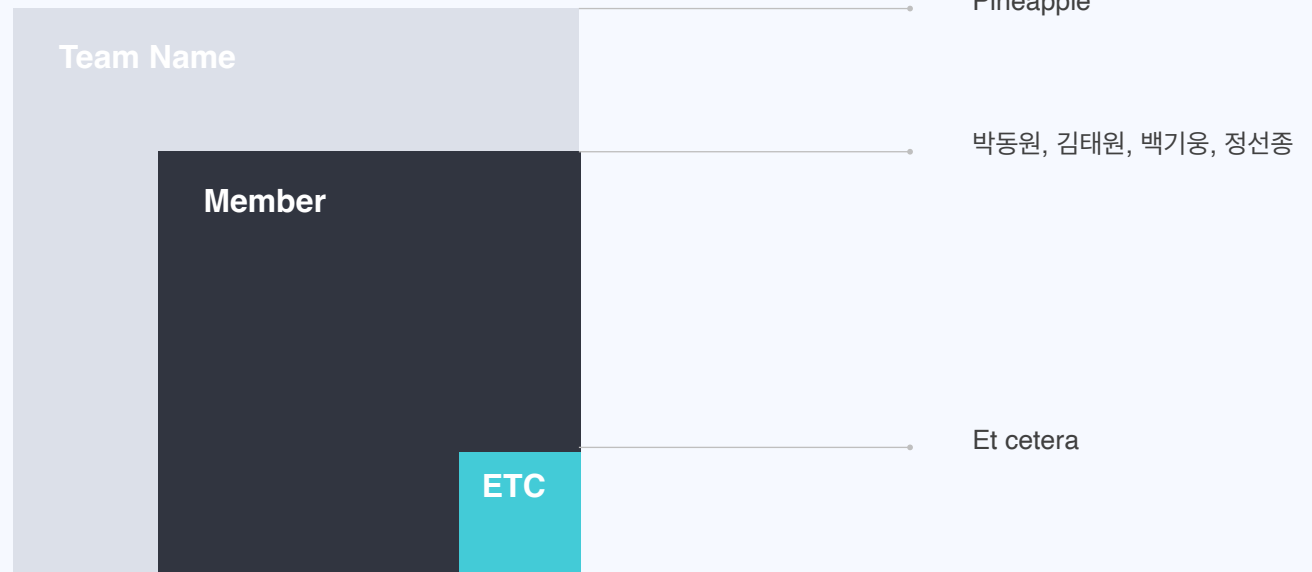
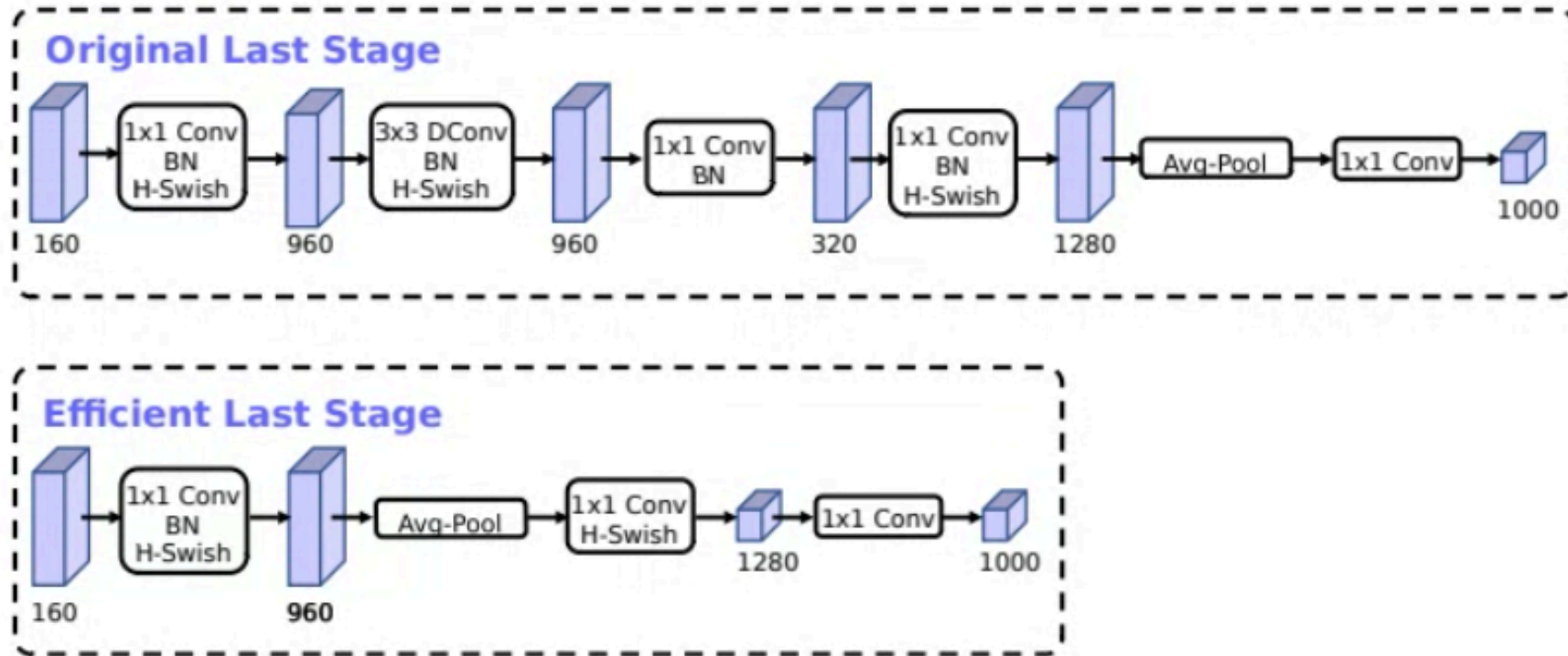


kaggle **project**

Ai project

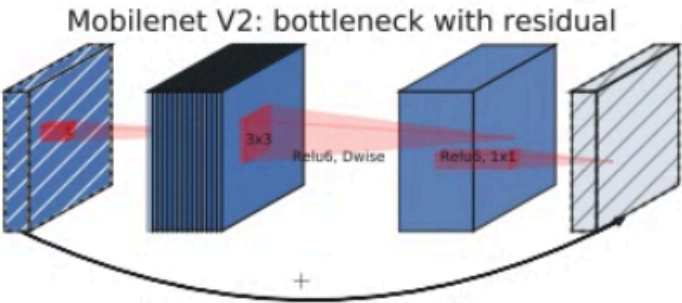


경량화(딥러닝 모델 더 작게 만들기)

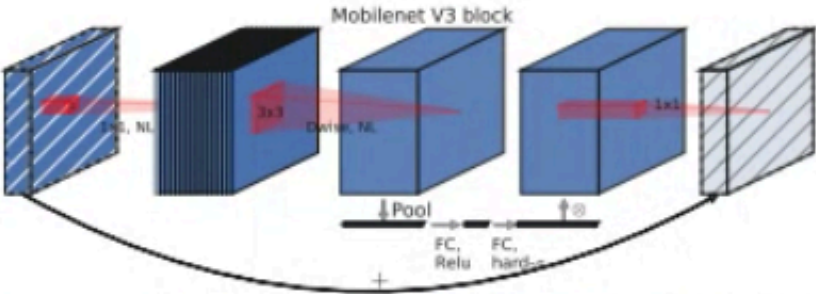


V2 & V3 비교

V2



V3



Backbone	mAP	Latency (ms)	Params (M)	MAdds (B)
V1	22.2	228	5.1	1.3
V2	22.1	162	4.3	0.80
MnasNet	23.0	174	4.88	0.84
V3	22.0	137	4.97	0.62
V3 [†]	22.0	119	3.22	0.51
V2 0.35	13.7	66	0.93	0.16
V2 0.5	16.6	79	1.54	0.27
MnasNet 0.35	15.6	68	1.02	0.18
MnasNet 0.5	18.5	85	1.68	0.29
V3-Small	16.0	52	2.49	0.21
V3-Small [†]	16.1	43	1.77	0.16

경량화 모델 중에서도 파라미터가 작아서
계산을 빠르게 할 수 있다

PARAMETER

mobileNet 최적의 파라미터 논문 MobileNetV3 에서 찾았습니다

모바일 최적의 파라미터	최적의 학습률	배치 크기	학습률 감소율	드롭아웃	L2 가중치 감쇠	이미지 전처리	지수 이동 평균 감소율	합성곱 층에 대한 배치 정규화 평균 감쇠율
	0.1	4096	0.01(3 에포크마다)	0.6	1e - 5	Inception과 동일한 방법 사용	0.9999	0.9999

PARAMETER

EfficientNet의 파라미터	학습 데이터셋	체크포인트	배치 크기	초기 학습률	드롭아웃	활성화 함수	모델 아키텍처	epochs
	Dogs vs. Cats	ImageNet (224, 224, 3)	1024	1e - 6	0.4	ReLU, Softmax	Sequential	20

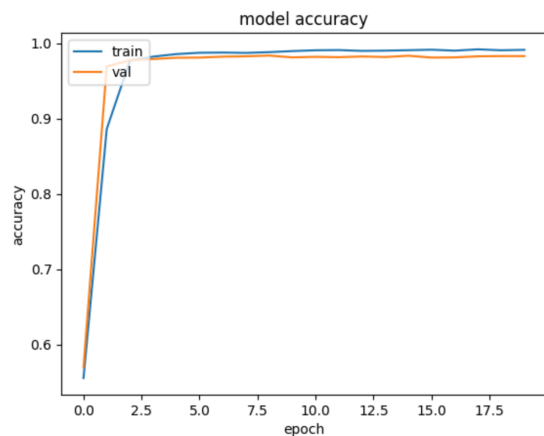
PARAMETER

EfficientNet의 파라미터	학습 데이터셋	체크포인트	배치 크기	초기 학습률	드롭아웃	활성화 함수	모델 아키텍처	epochs
	Dogs vs. Cats	ImageNet (224, 224, 3)	1024	1e - 6	0.4	ReLU, Softmax	Sequential	5

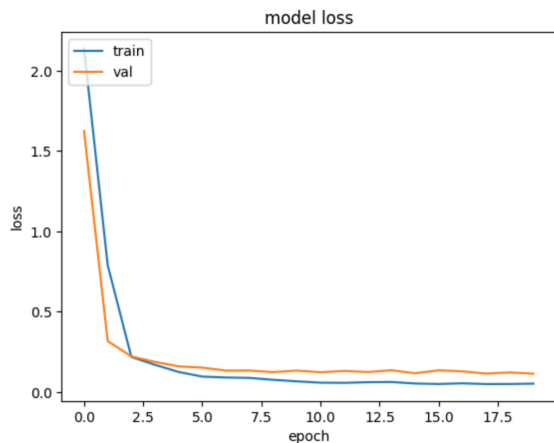
MobileNetV3Large, Test

accuracy & loss

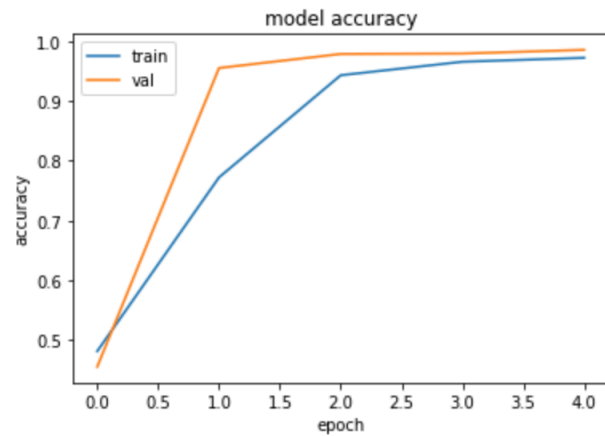
MobileNetV3Large_Test



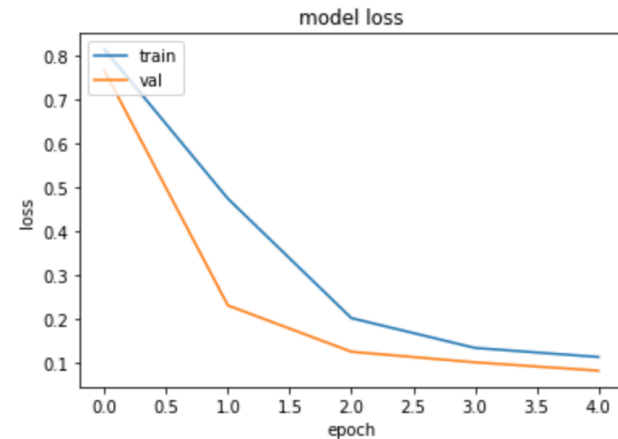
loss: 0.0521 - accuracy: 0.9912
val_loss: 0.1141 - val_accuracy: 0.9829



MobileNetV3Large



loss: 0.1140 - accuracy: 0.9718
val_loss: 0.0828 - val_accuracy: 0.9851



loss: 0.0826 - accuracy: 0.9880

Test

Final

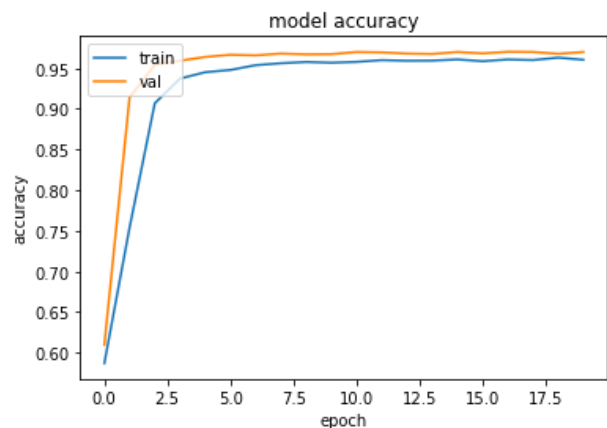
Accuracy & loss 결과 비교

PARAMETER

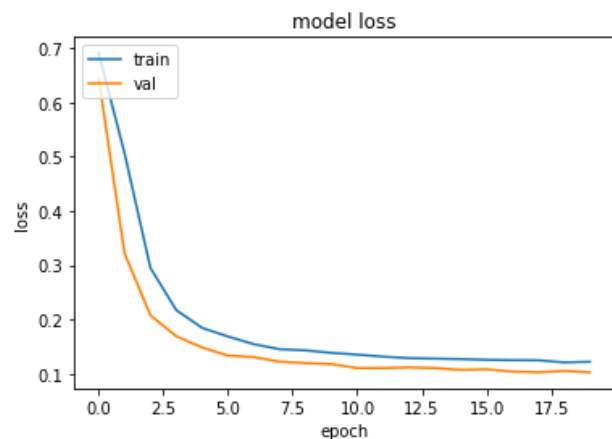
EfficientNet의 파라미터	학습 데이터셋	체크포인트	배치 크기	초기 학습률	드롭아웃	활성화 함수	모델 아키텍처	epochs
	Dogs vs. Cats	ImageNet (224, 224, 3)	1024	1e - 6	0.4	ReLU, Softmax	Sequential	20

accuracy & loss

MobileNetV3small

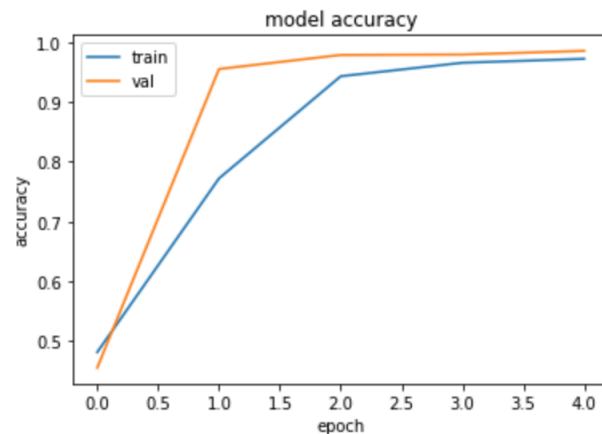


loss: 0.1225 - accuracy: 0.9604
val_loss: 0.1029 - val_accuracy: 0.9700

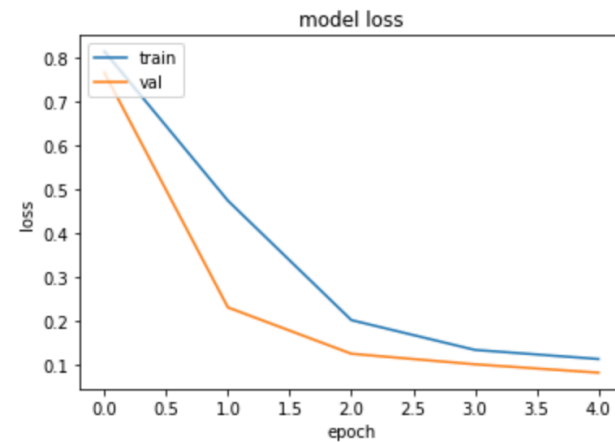


loss: 0.1001 - accuracy: 0.9740

MobileNetV3Large



loss: 0.1140 - accuracy: 0.9718
val_loss: 0.0828 - val_accuracy: 0.9851



loss: 0.0826 - accuracy: 0.9880

Large

Small



Accuracy & loss 결과 비교

MobileNetV3Large, small

Kaggle

MobileNetV3Large

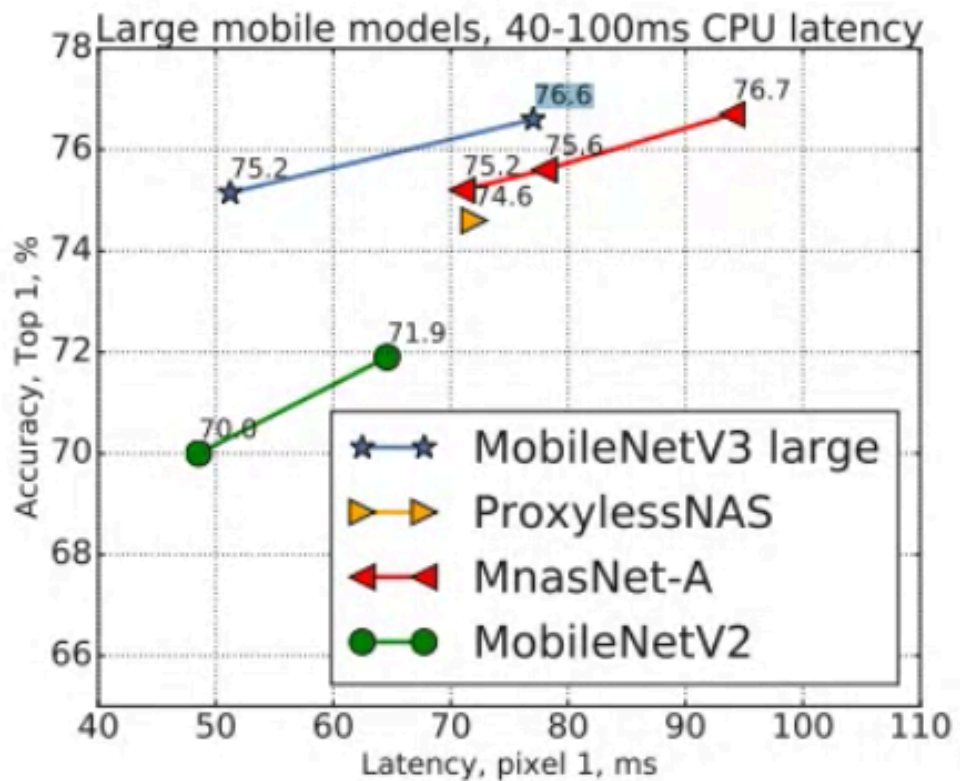
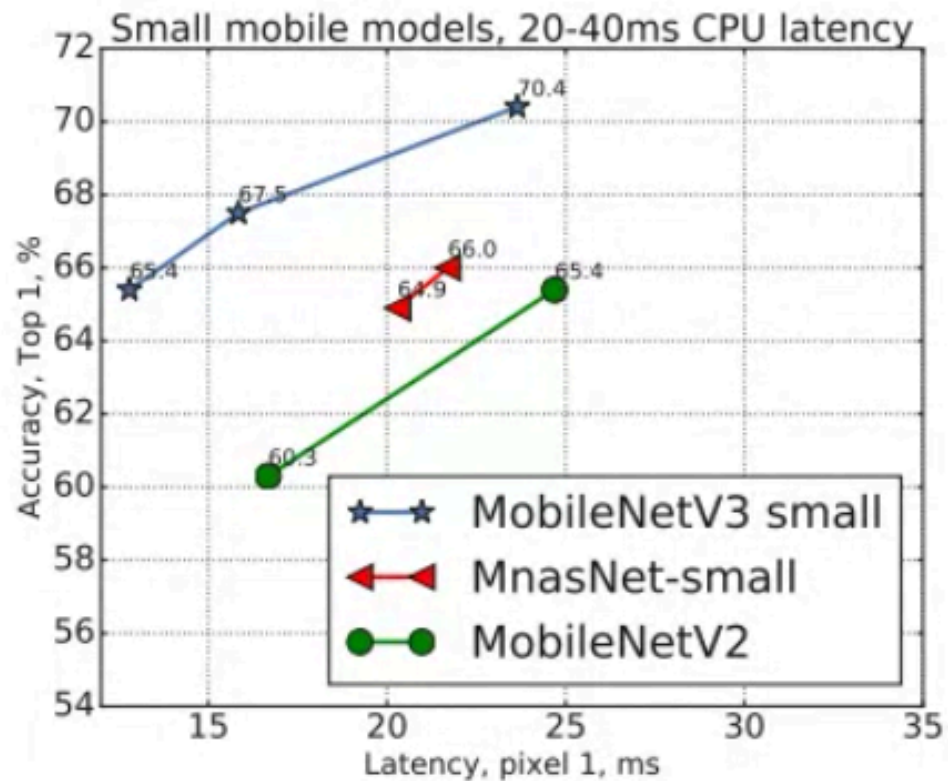
MobileNetV3small

Submission and Description		Private Score i	Public Score i	Selected
	submission_pineapple.csv Complete (after deadline) · 1h ago	1.78155	1.78155	<input type="checkbox"/>
	MobileNetV3Small_Dog_Output (1).csv Complete (after deadline) · 1h ago	1.86063	1.86063	<input type="checkbox"/>

소프트 맥스로 바꿔서 더 좋은 결과를 보임

mobileNet

V2 & V3 & small 비교



THANK
YOU