

MIRIAD

# 날씨 분류 모델

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201901208  
김현동

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# 문제 정의

계절을 맞추는 다중 클래스 문제

snow



Model

snow

fogsmog

rain

sandstorm

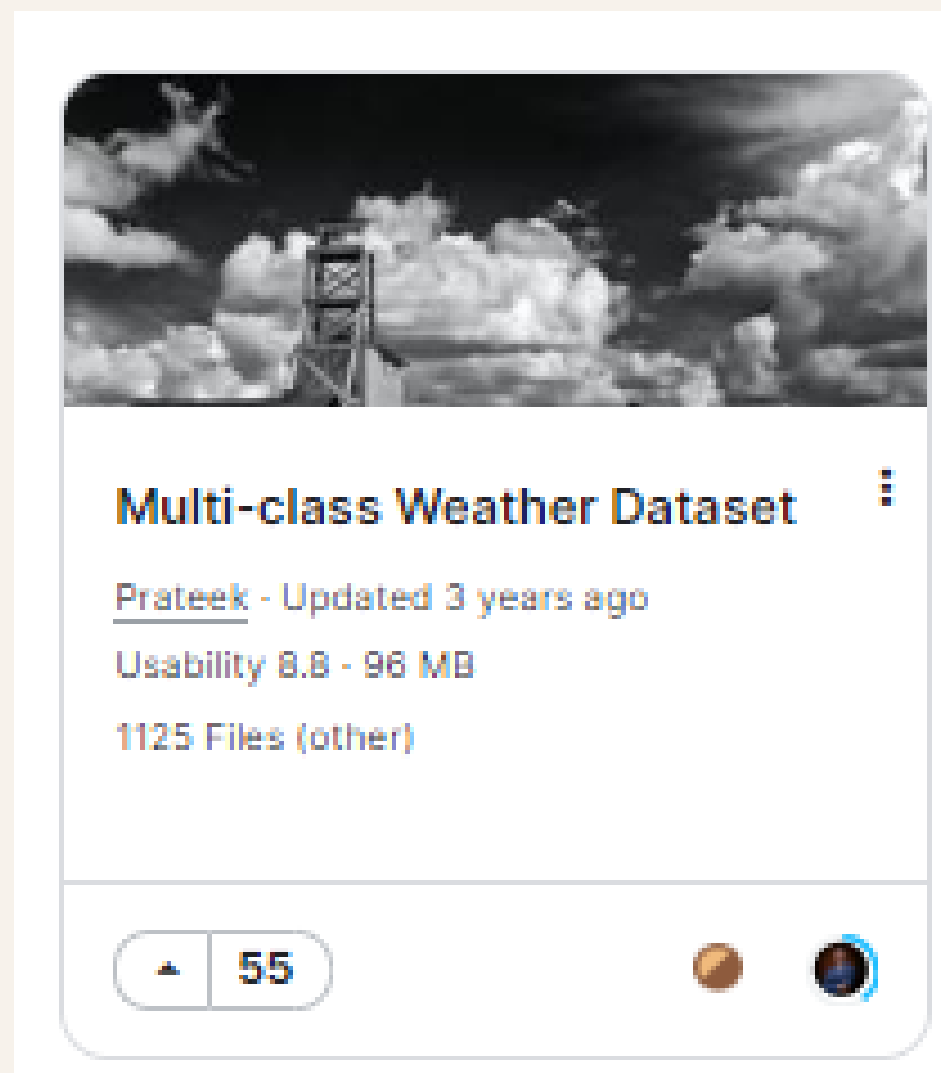
snow

lightning

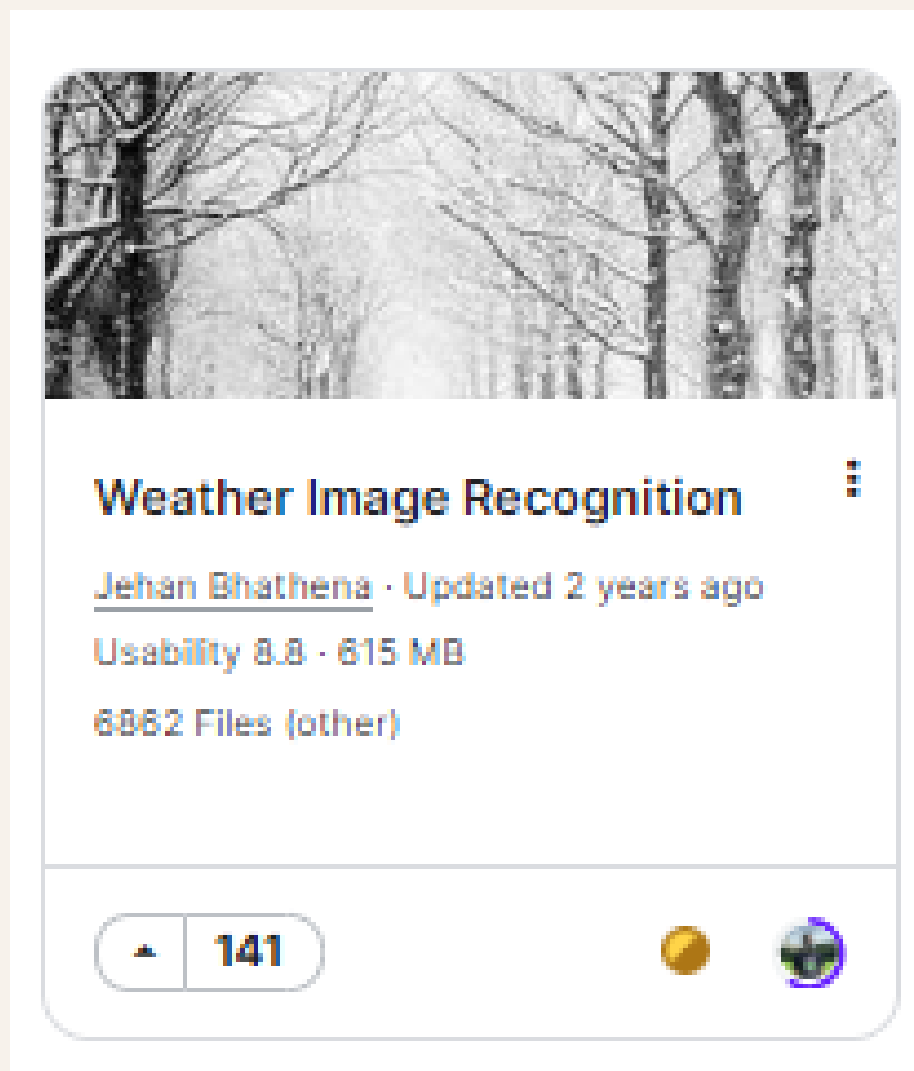
cloudy

shine

# 데이터 전처리



+



snow

fogsmog

rain

sandstorm

snow

lightning

cloudy

shine

```
drop_labels = ['Sunrise', 'dew', 'frost', 'glaze', 'hail', 'rainbow', 'rime']
```

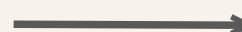
# 데이터 전처리

데이터 불균형

데이터 증강

( Shift , Zoom , Flip , Rotation )

labels	
fogsmog	690
rain	589
sandstorm	548
snow	489
lightning	313
Cloudy	243
Shine	196



```
[500, 500, 500, 489, 313, 243, 196]
Found 313 validated image filenames.
Found 196 validated image filenames.
Found 489 validated image filenames.
Found 243 validated image filenames.
Total Augmented images created= 759
[500, 500, 500, 500, 500, 500, 500]
```

# 데이터 전처리

Shine



Shine



rain



lightning



Shine



Shine



# 모델

모델 성능 비교 및 분석



설계한 CNN

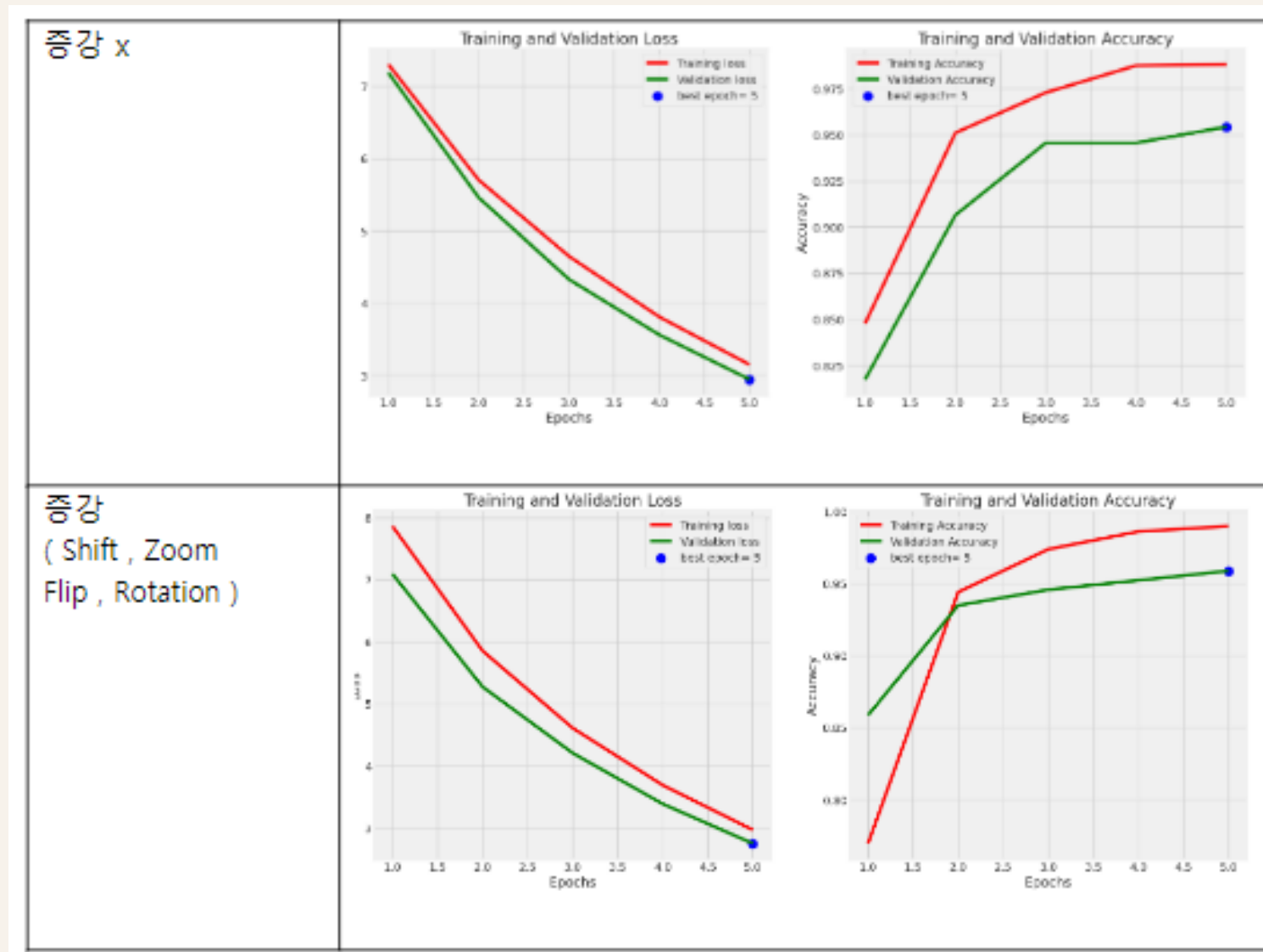
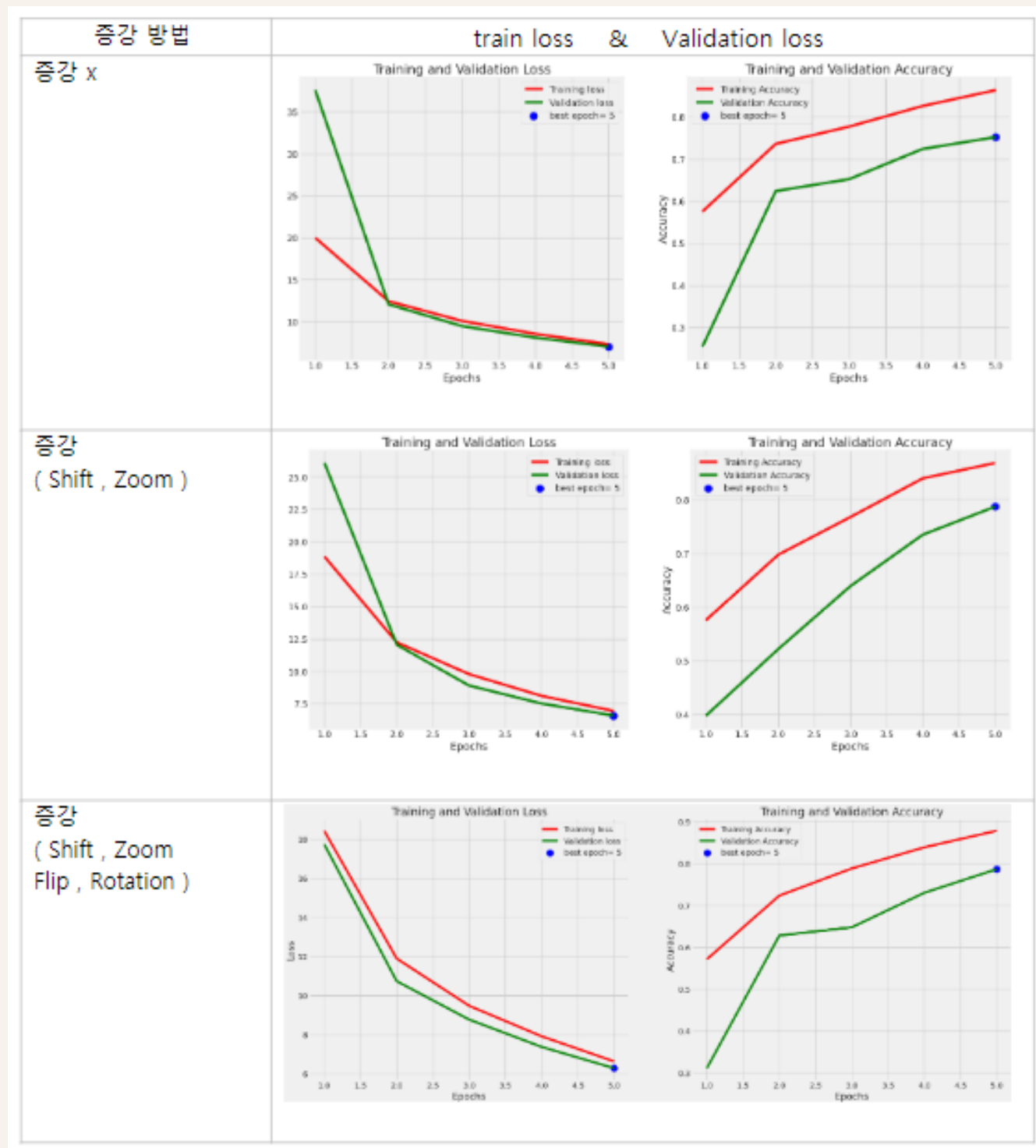


pre trained Model

# 실험 결과

learning curve

EfficientNet

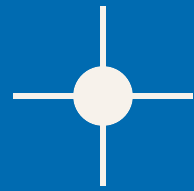




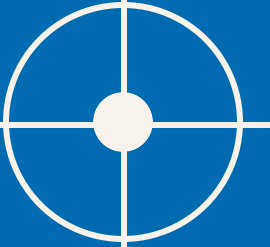
# 실험 결과

Accuracy

	CNN	EfficientNet
증강 x	0.75	0.94
증강 ( Shift , Zoom )	0.76	NULL
증강 ( Shift , Zoom Flip , Rotation )	0.76	0.93



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# 감사합니다



MIRIAD | Introduction Presentation

