

Mini Project Week01

Basic 1조

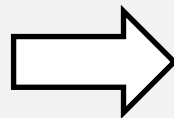
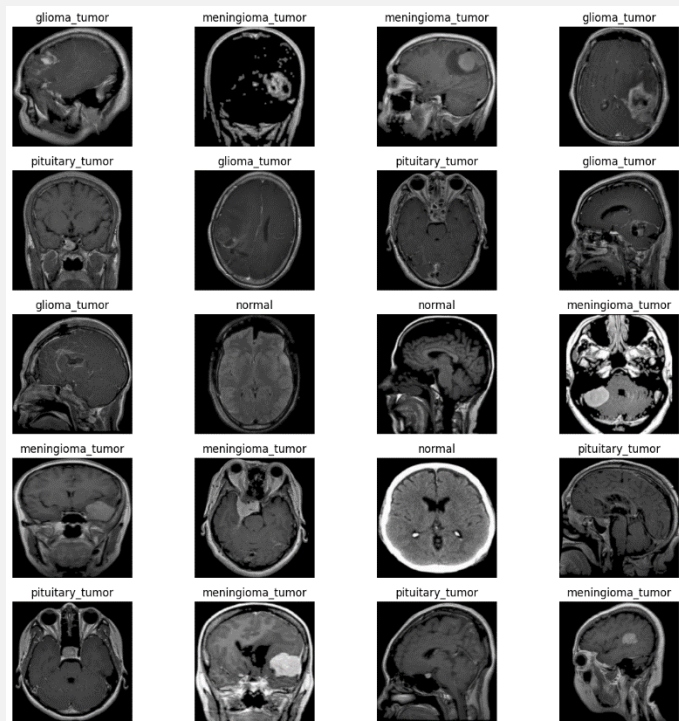
서지현

```
lookup.KeyValue  
f.constant(['em  
=tf.constant([0  
ce = tf.lookup.StaticV  
init,  
num_oov_buckets=5)
```

```
lookup.StaticVocabular  
initializer,  
num_oov_buckets,  
lookup_key_dtype=None  
name=None,  
experimental_is_open
```

Code Review

Goal



1. Glioma Tumor
2. Meningioma Tumor
3. Normal
4. Pituitary Tumor

ResNet50 Model



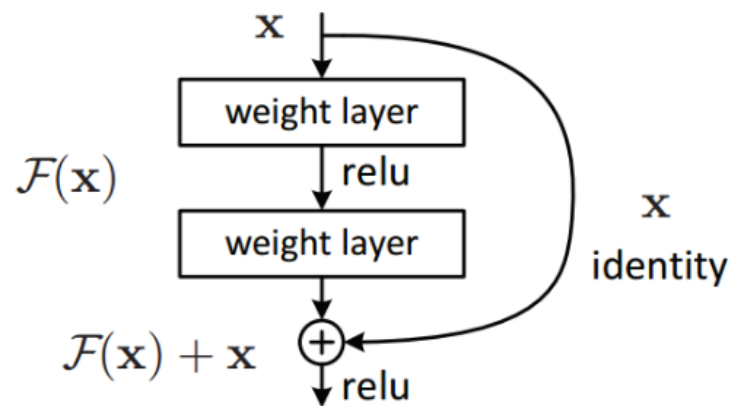
Model: "model"

Layer (type)	Output Shape	Param #
input_layer (InputLayer)	[(None, 224, 224, 3)]	0
resnet50 (Functional)	(None, None, None, 2048)	23587712
global_average_pooling_layer (GlobalAveragePooling2D)	(None, 2048)	0
flatten (Flatten)	(None, 2048)	0
dense (Dense)	(None, 512)	1049088
dropout (Dropout)	(None, 512)	0
output_layer (Dense)	(None, 4)	2052

Total params: 24638852 (93.99 MB)

Trainable params: 1051140 (4.01 MB)

Non-trainable params: 23587712 (89.98 MB)



평가 지표

	precision	recall	f1-score	support
0	0.96	0.86	0.91	184
1	0.83	0.92	0.87	179
2	0.96	0.98	0.97	81
3	0.94	0.94	0.94	175
accuracy			0.91	619
macro avg	0.92	0.92	0.92	619
weighted avg	0.92	0.91	0.91	619

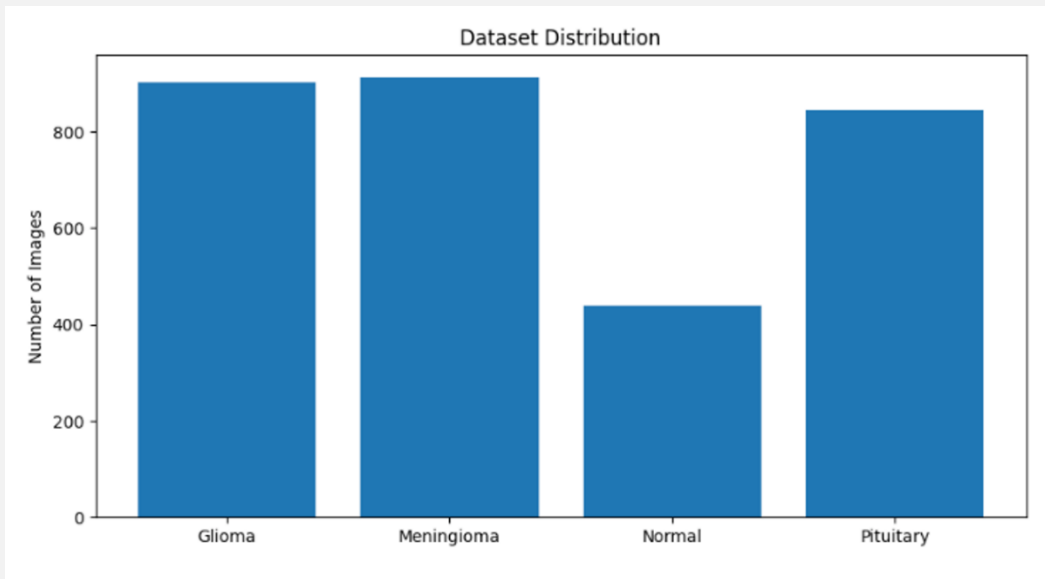
		실제 정답	
		True	False
분류 결과	True	True Positive	False Positive
	False	False Negative	True Negative

$$(Recall) = \frac{TP}{TP + FN}$$

Performance Improvement

성능 개선 방법

- Batch Normalization
- K-Fold CV
- Callback 추가
- ResNet101
- Optimizer
- 앙상블



참고

<https://www.kaggle.com/code/shujunge/gridsearchcv-with-keras>

<https://blog.naver.com/nywoo19/221970913783>

<https://rinha7.github.io/keras-callbacks/>

<https://dacon.io/codeshare/4618>

<https://aistudy9314.tistory.com/29>