

Tables

1 Introduction

Acuraccy			
	Training	Validation	Testing
Proposed	67%	67%	67.1%
AlexNet	53%	54.5%	43.1%
ResNet	67%	74.96%	67.2%

Table 1: Comparison between models.

CPU/GPU	Specs	inference time
GPU	RTX 2060	$\geq 1s$.1
	Tesla P100	$\geq 150ms$.1
	RTX2080 Ti	$\sim 90ms$.2
CPU	i9 9940X	$\sim 2.4s$.2

Table 2: Inference benchmark.

Operation	Values
Rotation	Random rotation between 0 and 5 degrees
Fill Mode	Constant
Horizontal Flip	TRUE: 180 degree rotation
Vertical Flip	TRUE: Rotate vertically
Adding Noise	Random noise

Table 3: Augmentation Operations.

Benchmark	Mask R-CNN Backbone	
	R-50-FPN	R-101-FPN
im/gpu	2	2
train mem(GB)	5.2	7.9
train time (s/iter)	0.4536	0.5665
total train time(hr)	11.3	14.2
inference time(s/im)	0.12966 + 0.034	0.15384 + 0.034
box AP	37.8	40.1
mask AP	34.2	36.1

Table 4: Training benchmark.

Category	BI-RADS	Diagnosis	Likelihood of Cancer
1	BI-RADS 0	Incomplete	N/A
2	BI-RADS 1	Negative.	0%
3	BI-RADS 2	Benign lesion.	0%
4	BI-RADS 3	Probably benign lesion.	but <2% risk of malignancy
5	BI-RADS 4	Suspicious of Malignancy (3-95%) Divided into three parts:	4A: 3-10% 4B: 11-50% 4C: 51-95%
6	BI-RADS 5	Highly suggestive of malignancy	>95%
7	BI-RADS 6	Known cancer	100%

Table 5: BI-RADS Categories

	box AP	mask AP	Average inference time(s/im)
Faster (R101-FPN)	42.0%	-	0.07588
Mask (R101-FPN)	53%	54.5%	0.07517

Table 6: Comparison between models.

Week Number	Topic
1	Introduction
2	Second
3	Third
4	Fourth
5	Fifth
6	Development
7	Development
8	Development
9	Development
10	Writing Final Report.

Table 7: Adaptive Table