

Cloud and Hardware Specifications

CPU	2vCPU - 13 GB, Quad core Intel i5-4690K @ 3.5 GHz
GPU	1xNVIDIA Tesla V100, 1x NVIDIA GeForce GTX 980 Ti
Zone	us-west-1b
Cloud	Google Cloud Platform

Model Specifications

MODEL	Network	TRAINING TIME	# EPISODES	BATCH SIZE & LEARNING RATE
Baseline	4 Layer Dense Neural Network	~ 17 Hours	75	50; 0.09
Advanced	5 Layer CNN	~ 5 Hours	320	256; 0.0001

Baseline Architecture

Layer 1	Layer 2	Layer 3	Layer 4
24 (relu)	48 (relu)	72 (relu)	96 (relu)

CNN Architecture

	Width	Height	Depth	# Params	Filter Width	Filter Height	Filter Depth	Filter Count	Stride Width	Stride Height
Input	240	256	3							
Conv 1	55	59	32	55328	24	24	3	32	4	4
Conv 2	22	22	64	452672	13	17	32	64	2	2
Conv 3	11	11	64	589888	12	12	64	64	1	1
Conv 4	4	4	128	524416	8	8	64	128	1	1
Conv 5	1	1	128	262272	4	4	128	128	1	1
Subtotal				1884576						
Value Stream	1	1	64	0						
Adv Stream	1	1	64	0						
Value Flat			64	0						
Adv Flat			64	0						
Value FC			1	65						
Adv FC			7	455						
Final Output			7	0						
Total Params				1885096						