Machine Learning__HW03

- Model 1

Model 1		Probability			Answer			Judgement	
Target		Dog	Cat	Other	Dog	Cat	Other		
Data 1	Dog	0.4	0.3	0.3	1	0	0	Dog	Correct
Data 2	Cat	0.3	0.4	0.3	0	1	0	Cat	Correct
Data 3	Dog	0.5	0.2	0.3	1	0	0	Dog	Correct
Data 4	Other	0.6	0.2	0.2	0	0	1	Dog	Wrong

For Model 1

MAE = 0.417	0.6 0.3 0.3
	0.3 0.6 0.3
	0.5 0.2 0.3
	0.6 0.2 0.8

MSE = 0.208	0.36 0.09 0.09
	0.09 0.36 0.09
	0.25 0.04 0.09
	0.36 0.04 0.64

Cross-entropy = 5.966	1.322 0.000 0.000
	0.000 1.322 0.000
	1.000 0.000 0.000
	0.000 0.000 2.322

- Model 2

Model 2		Probability			Answer			Judgement	
Target		Dog	Cat	Other	Dog	Cat	Other		
Data 1	Dog	0.8	0.1	0.1	1	0	0	Dog	Correct
Data 2	Cat	0.1	0.7	0.2	0	1	0	Cat	Correct
Data 3	Dog	0.7	0.1	0.2	1	0	0	Dog	Correct
Data 4	Other	0.4	0.3	0.3	0	0	1	Dog	Wrong

For Model 2

MSE =0.250	0.2	0.1	0.1
	0.1	0.3	0.2
	0.3	0.1	0.2
	0.4	0.3	0.7

MAE =0.090	0.04	0.01	0.01
	0.01	0.09	0.04
	0.09	0.01	0.04
	0.16	0.09	0.49

Cross-entropy = 3.088	0.322	0.000	0.000
	0.000	0.515	0.000
	0.515	0.000	0.000
	0.000	0.000	1.737