



Model Development Phase Template

Date	15 October 2024
Team ID	739855
Project Title	Predicting Diamond Prices With ANN Using Deep Learning
Maximum Marks	10 Marks

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include a summary and training and validation performance metrics for multiple models, presented through respective screenshots.

Initial Model Training Code (5 marks):

[] history = model.fit(x_train, y_train, epochs=100, batch_size=32, validation_split=0.1)

Model Validation and Evaluation Report (5 marks):

		Training and Validation Performa
Model	Summary	Metrics

model.summary()			674/674 — Epoch 2/100	2s 2ms/step - loss: 6004717.0000 - mae: 1798.3607 - val_loss:
Model: "sequential"			674/674	3s 2ms/step - loss: 315008.2188 - mae: 406.5912 - val_loss: 2
Layer (type)	Output Shape	Param #	Epoch 3/100	
dense (Dense)	(None, 128)	1,280	674/674 — Epoch 4/100	2s 3ms/step - loss: 235605.3281 - mae: 332.6490 - val_loss: 2
nse_1 (Dense)	(None, 64)	8,256	674/674	2s 2ms/step - loss: 229313.7031 - mae: 324.9062 - val_loss: 2
se_2 (Dense)	(None, 1)	65	Epoch 5/100	
otal params: 9,601 (37.50 KB)			674/674 — Epoch 6/100	1s 2ms/step - loss: 219496.8438 - mae: 319.4495 - val_loss: .
Trainable params: 9,601 (37.50 Non-trainable params: 0 (0.00			674/674	1s 2ms/step - loss: 219706.8906 - mae: 318.4552 - val_loss:
			Epoch 7/100	
			674/674 — Epoch 8/100	1s 2ms/step - loss: 207558.4688 - mae: 310.3093 - val_loss:
			674/674	1s 1ms/step - loss: 214595.2812 - mae: 313.8318 - val_loss:
			Epoch 9/100	
			674/674 — Epoch 10/100	1s 2ms/step - loss: 216433.6562 - mae: 315.0001 - val_loss:
			674/674	1s 2ms/step - loss: 213671.8125 - mae: 308.4117 - val_loss:
			Epoch 11/100 674/674	2s 2ms/step - loss: 214080.5469 - mae: 308.7069 - val loss:
			Epoch 12/100	25 2ms/step - 10ss: 214000.3409 - mae: 308.7009 - Val_10ss:
			674/674	2s 2ms/step - loss: 212854.2500 - mae: 307.5582 - val_loss:
			Epoch 13/100 674/674	2s 2ms/step - loss: 207658.4844 - mae: 303.1884 - val_loss:
			Epoch 14/100	25 Ziiis/step - 1055. 20/030.4044 - iiiae. 303.1004 - Val_1055.
			674/674	1s 2ms/step - loss: 203917.1875 - mae: 299.8109 - val_loss:
			Epoch 15/100 674/674	1s 2ms/step - loss: 203519.4219 - mae: 299.2527 - val loss:
			Enoch 84/188	20 2m3/3ccp 1033. 20332314213 mac. 23312527 Val_2033.
			674/674 ———	1s 2ms/step - loss: 110370.2031 - mae: 197.4
			→ Epoch 85/100 674/674	1s 2ms/step - loss: 107700.4844 - mae: 195.1
			Epoch 86/100	20 - 1000-20 (100-10) (100-100 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (100-100) 100-1000 (1
			674/674 — Epoch 87/100	1s 2ms/step - loss: 105300.4609 - mae: 193.89
			674/674	1s 2ms/step - loss: 100781.6094 - mae: 189.20
			Epoch 88/100 674/674	1s 2ms/step - loss: 102141.9766 - mae: 190.7
			Epoch 89/100	The state of the s
			674/674 — Epoch 90/100	1s 2ms/step - loss: 106255.8750 - mae: 194.5
			674/674 —	2s 2ms/step - loss: 101369.6016 - mae: 190.90
			Epoch 91/100 674/674	2s 2ms/step - loss: 98009.5938 - mae: 188.00
			Epoch 92/100	
			674/674 — Epoch 93/100	2s 2ms/step - loss: 102004.5000 - mae: 189.5
			674/674 ———	1s 2ms/step - loss: 99984.3125 - mae: 188.53
			Epoch 94/100	1e 3mc/ston loss: 05066 7366 mag: 196 13
			674/674 — Epoch 95/100	1s 2ms/step - loss: 95966.7266 - mae: 186.124
			674/674 ———	1s 2ms/step - loss: 94505.1094 - mae: 184.000
			Epoch 96/100 674/674	1s 2ms/step - loss: 95629.4609 - mae: 184.355
			Epoch 97/100	
			674/674 ———	1s 2ms/step - loss: 96706.7344 - mae: 186.055
			Epoch 98/100	
			Epoch 98/100 674/674 ————————————————————————————————————	1s 2ms/step - loss: 96791.5703 - mae: 186.350