

Daniel Crawford Writeup

Housing Data Set

Standard Gradient Descent

RMSE train: 8.413243540865752

RMSE test: 9.271378545493256

Stochastic Gradient Descent

RMSE train: 8.229463062175416

RMSE test: 9.271155662535403

Gradient Descent with momentum

RMSE train: 7.870075312391622

RMSE test: 8.706962021577

Gradient Descent with Nestorov momentum

RMSE train: 7.869954952067746

RMSE test: 8.705655522967003

Adagrad

RMSE train: 6.391483564871793

RMSE test: 6.558738892662027

Titanic Data Set

Standard Gradient Descent

	Train	Test
Accuracy	64.09	60.31
Precision	60.16	44.44
Recall	18.45	20.2
F1 Score	28.24	27.78

Stochastic Gradient Descent

	Train	Test
Accuracy	69.34	68.7
Precision	93.48	84.0
Recall	21.45	21.21
F1 Score	34.89	33.87

Gradient Descent with momentum

	Train	Test
Accuracy	67.72	67.56
Precision	78.38	73.33
Recall	21.7	22.22
F1 Score	33.98	34.11

Gradient Descent with Nestorov momentum

	Train	Test
Accuracy	75.07	75.95
Precision	60.64	61.11
Recall	99.5	100.0
F1 Score	75.35	75.86

Adagrad

	Train	Test
Accuracy	44.51	43.13
Precision	40.84	39.92
Recall	100.0	100.0
F1 Score	57.99	57.06