|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Linear Regression (Normal Equations)** | **Linear Ridge Regression (Normal Equations)** | **Linear Ridge Regression (Gradient Descent)** | **Logistic Regression (Gradient Descent)** | **SVM** |
| **Spambase** | Train Acc:  0.900  Test Acc:  0.889 | Train Acc:  0.900  Test Acc:  0.897 | Train Acc:  0.904  Test Acc:  0.900  Lambda - 0.58, epochs – 1000, lr – 0.001  Batch size = 32 | Train Acc: 0.939  Test Acc: 0.935  Epochs 2600, lr 0.0015 | Train Acc: 0.932  Test Acc:  0.925  C = 1.0  Tol = 0.001  Max passes = 200 |
| **Housing** | Train MSE: 22.081  Test MSE:  25.048 | Train MSE:  22.400  Test MSE:  22.465 | Train MSE:  22.50  Test MSE:  22.80  Lamba = 0.72  Epochs = 3000  Learning rate = 0.001  Batch size = 32 | N/A – The labels are continuous and therefore not suitable to be categorized by a binary classifier but rather a linear classifier. | N/A |

A chart of a logistic regression confusion matrix

AI-generated content may be incorrect.A graph of a graph of a graph

AI-generated content may be incorrect.

A screenshot of a graph

AI-generated content may be incorrect.

SVM (Digits):

Linear Kernel (C = 1.0)

Train Acc: 95.36%

Test Acc: 93.45%

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AI-generated content may be incorrect.

Rbf kernel (C = 4.0)

Train Acc: 0.981

Test Acc: 0.972

Poly kernel (C = 5.0)

Train Acc: 0.984

Test Acc: 0.974

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