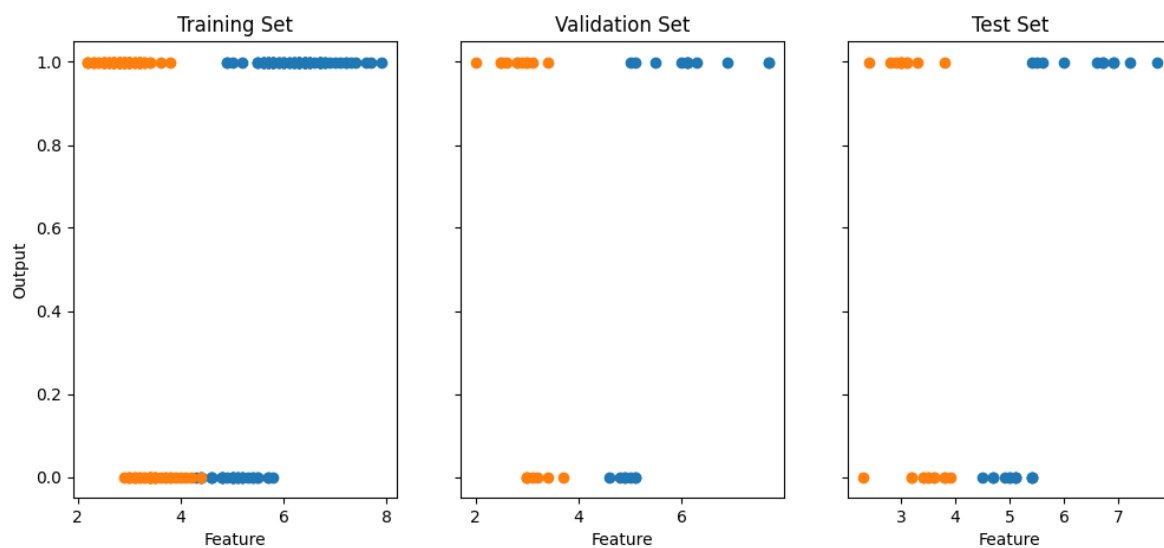Rakibul Islam
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Course: Artificial Intelligence Laboratory
Course Code: CSE 3812/CSI 342 (B)
Trimester: Fall 2022
Department: CSE

Iris Dataset (Logistic Regression)

1000 Iterations

Learning Rate	Initial Training Cost	Final Training Cost	Initial Test Cost	Final Test Cost	Initial Validation Accuracy	Final Validation Accuracy
0.1	3.338	0.099	2.743	0.094	52.38%	100.00%
0.01	3.769	0.355	2.959	0.360	75.00%	95.00%
0.001	3.658	0.727	2.968	0.652	66.67%	66.67%
0.0001	3.047	2.72	4.428	3.961	60.00%	60.00%
0.00001	3.735	3.687	3.331	3.288	76.00%	76.00%

Feature vs Output Graph:

Iteration VS Cost Graph:

Logistic Regression (Alpha=0.1)

Logistic Regression (Alpha=0.01)

Logistic Regression (Alpha=0.001)

Logistic Regression (Alpha=0.0001)

Logistic Regression (Alpha=1e-05)