

1 Plots Part A

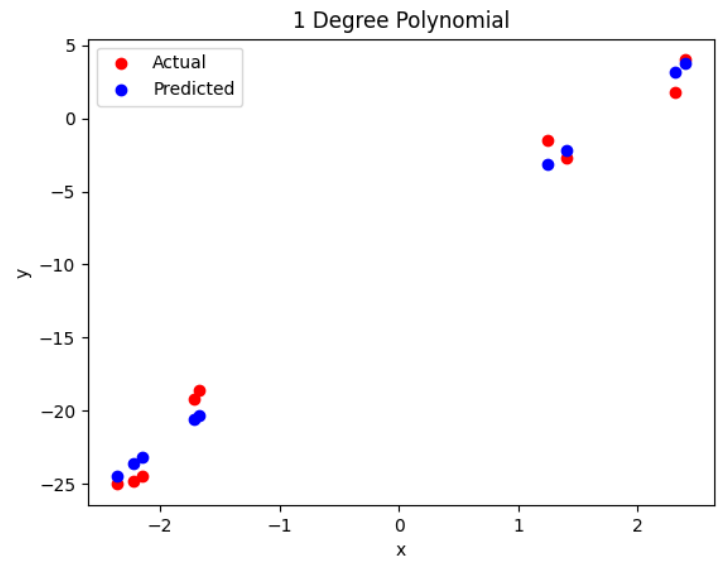


Figure 1: Polynomial Degree 1

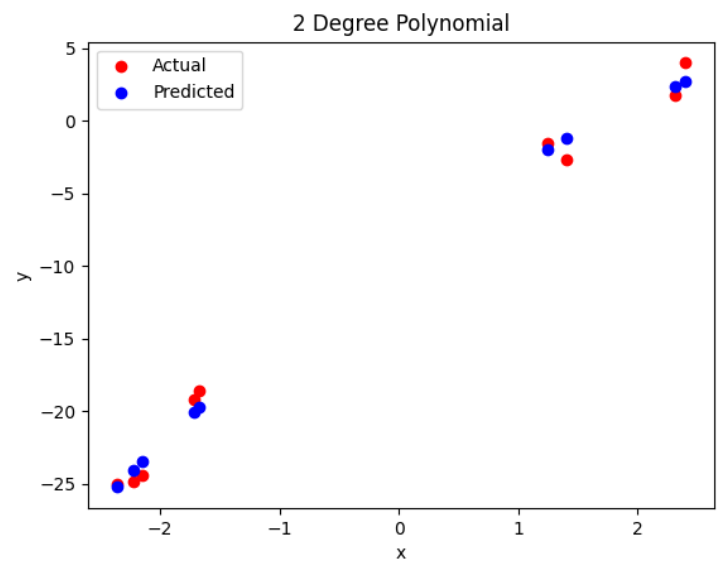


Figure 2: Polynomial Degree 2

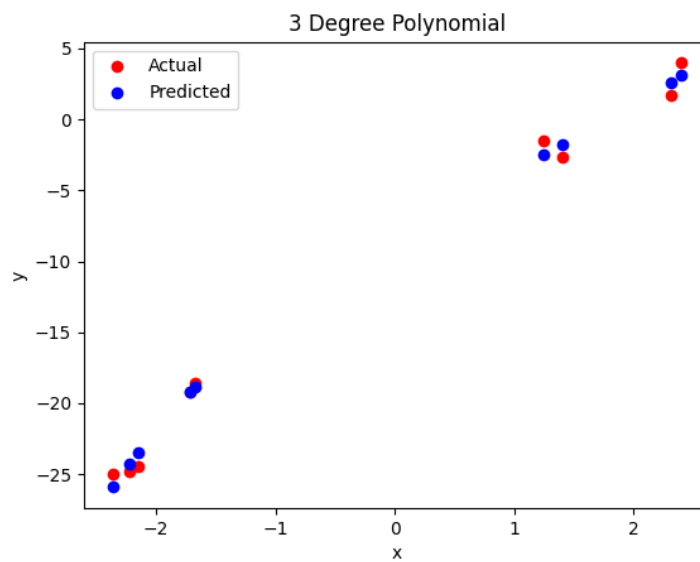


Figure 3: Polynomial Degree 3

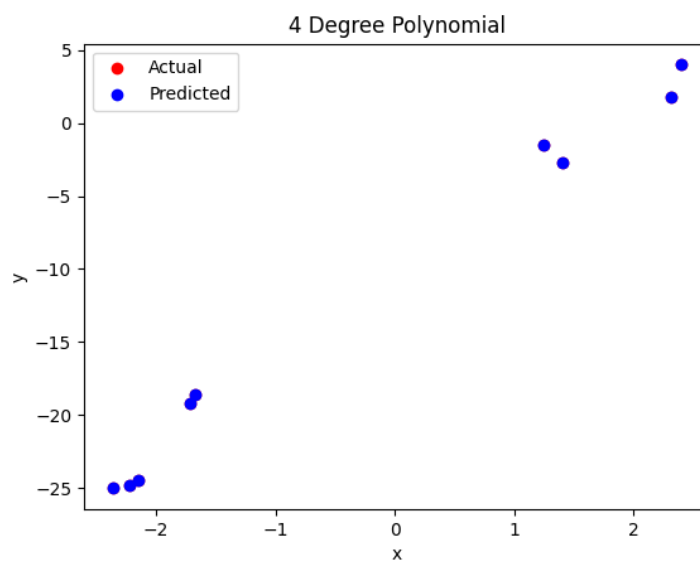


Figure 4: Polynomial Degree 4

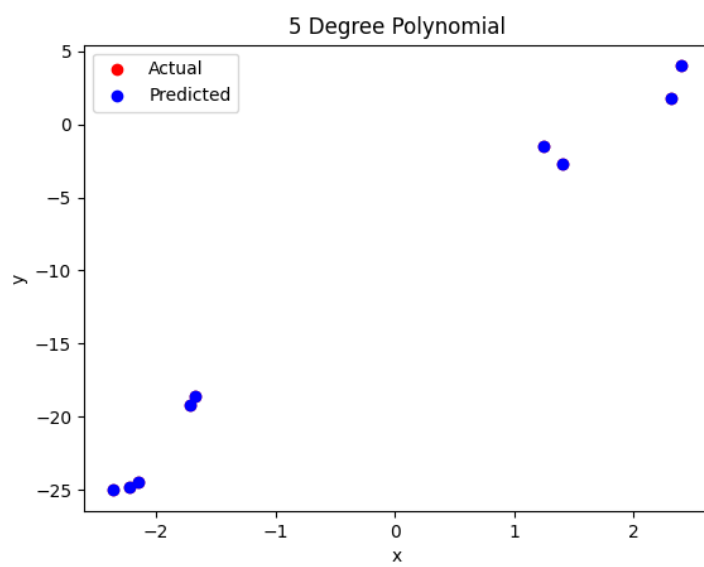


Figure 5: Polynomial Degree 5

## 2 Plots Part B

I have used pytorch's Linear model<sup>1</sup> as model and CrossEntropyLoss<sup>2</sup> as loss function.

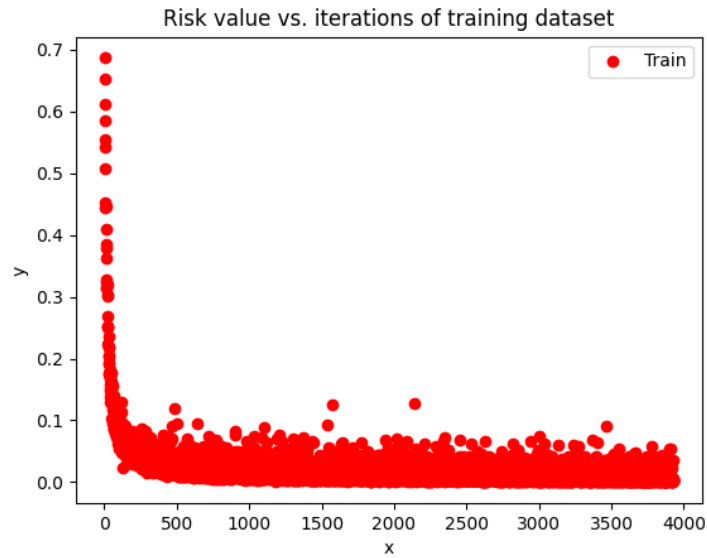


Figure 6: Plot of training risk value vs. iterations of training

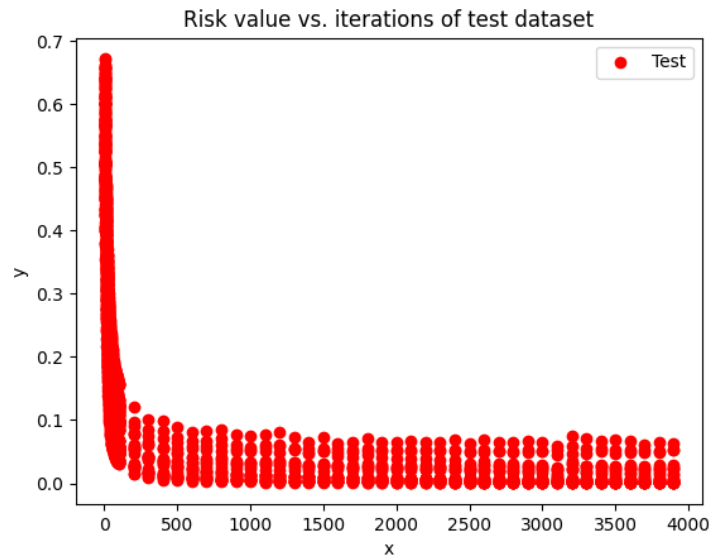


Figure 7: Plot of test set risk value vs. iterations of training

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<sup>1</sup><https://pytorch.org/docs/stable/generated/torch.nn.Linear.html>

<sup>2</sup><https://pytorch.org/docs/stable/generated/torch.nn.CrossEntropyLoss.html>

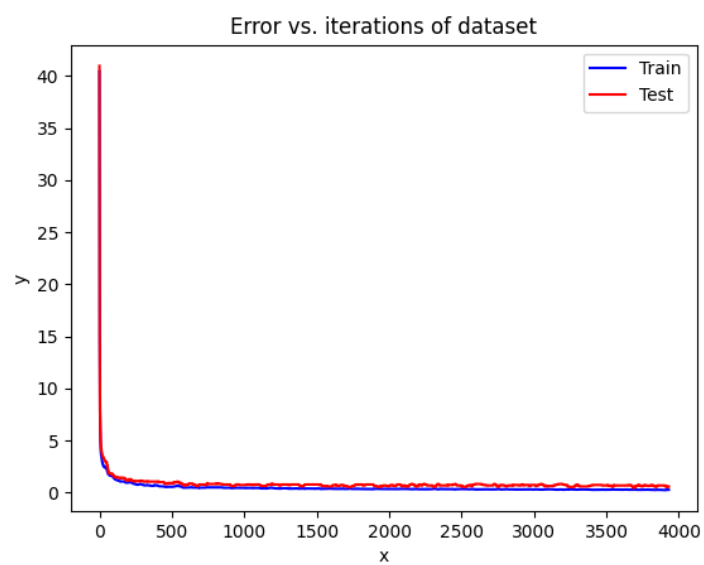


Figure 8: Plot of error vs. iterations