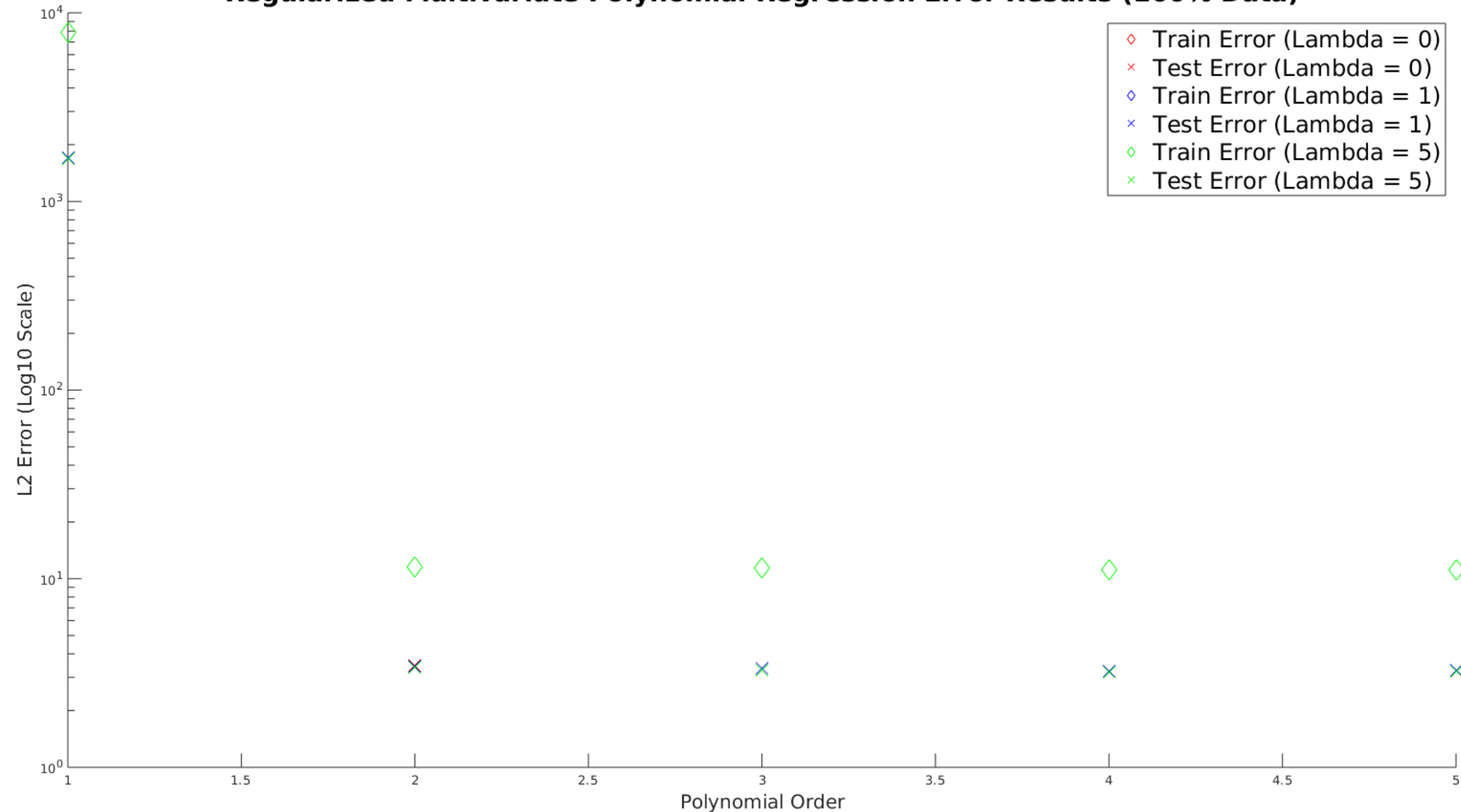# Homework #2 Answers

Machine Learning EE5354

Javier Salazar 1001144647
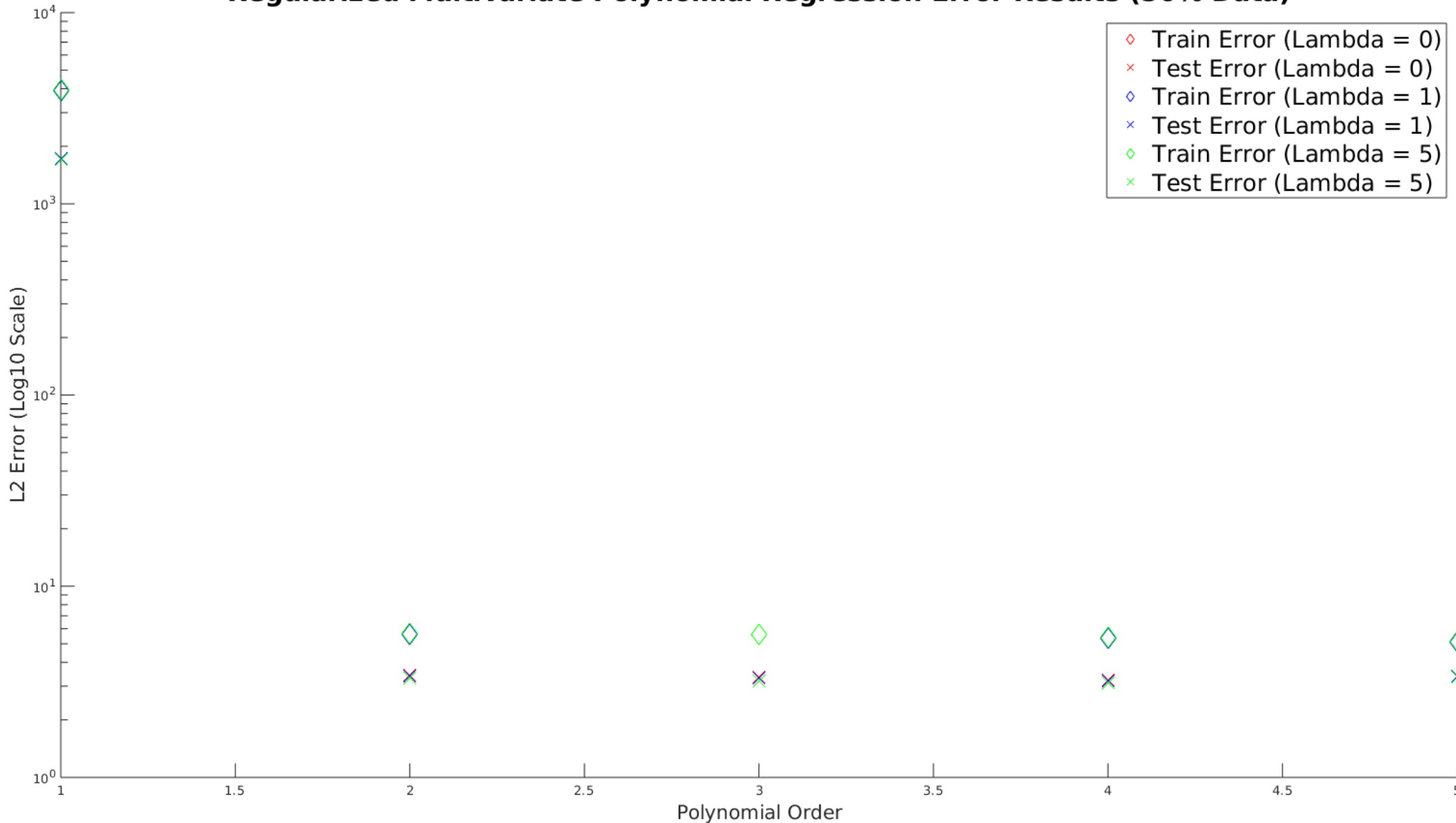
Regularized Multivariate Polynomial Regression Error Results (100% Data)

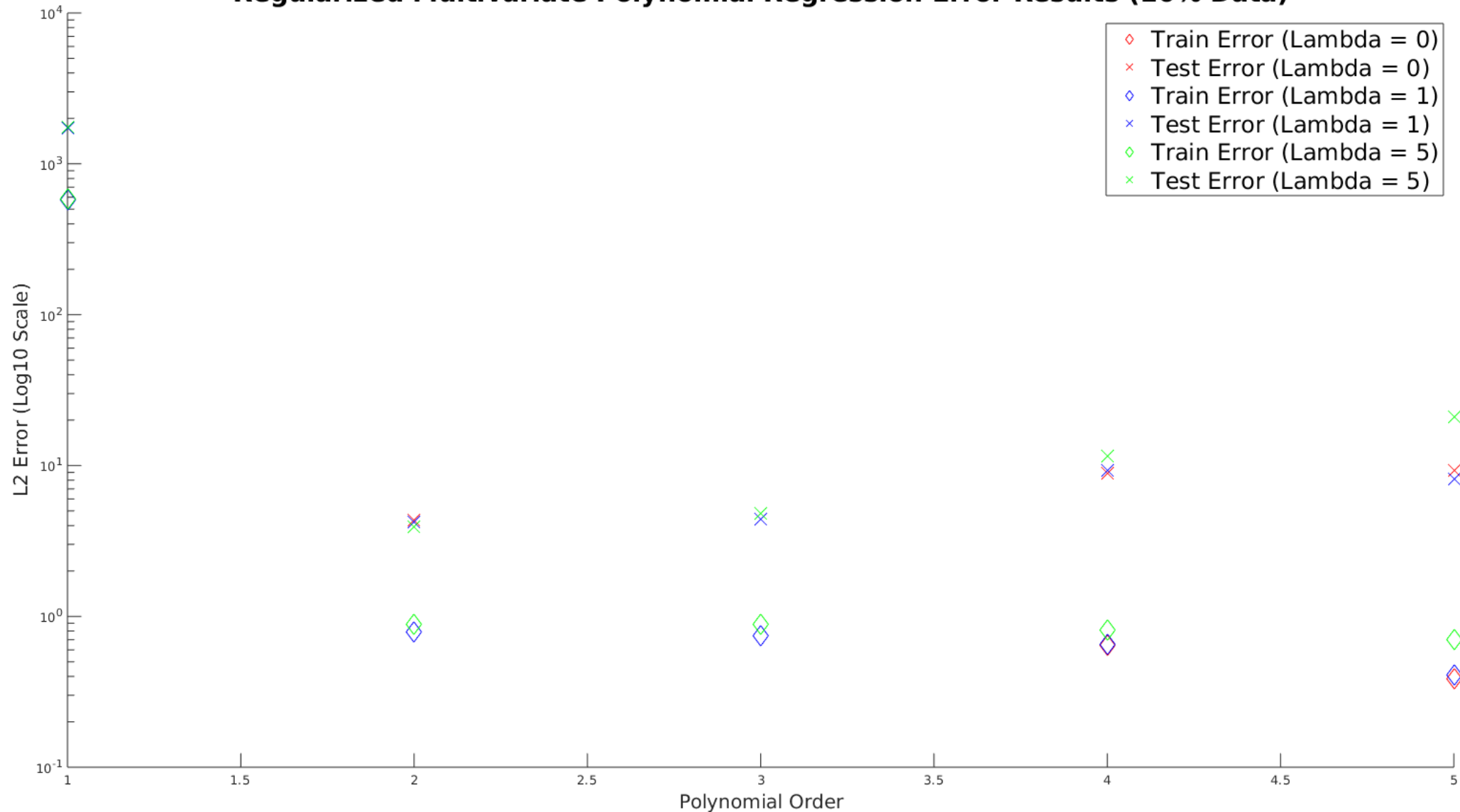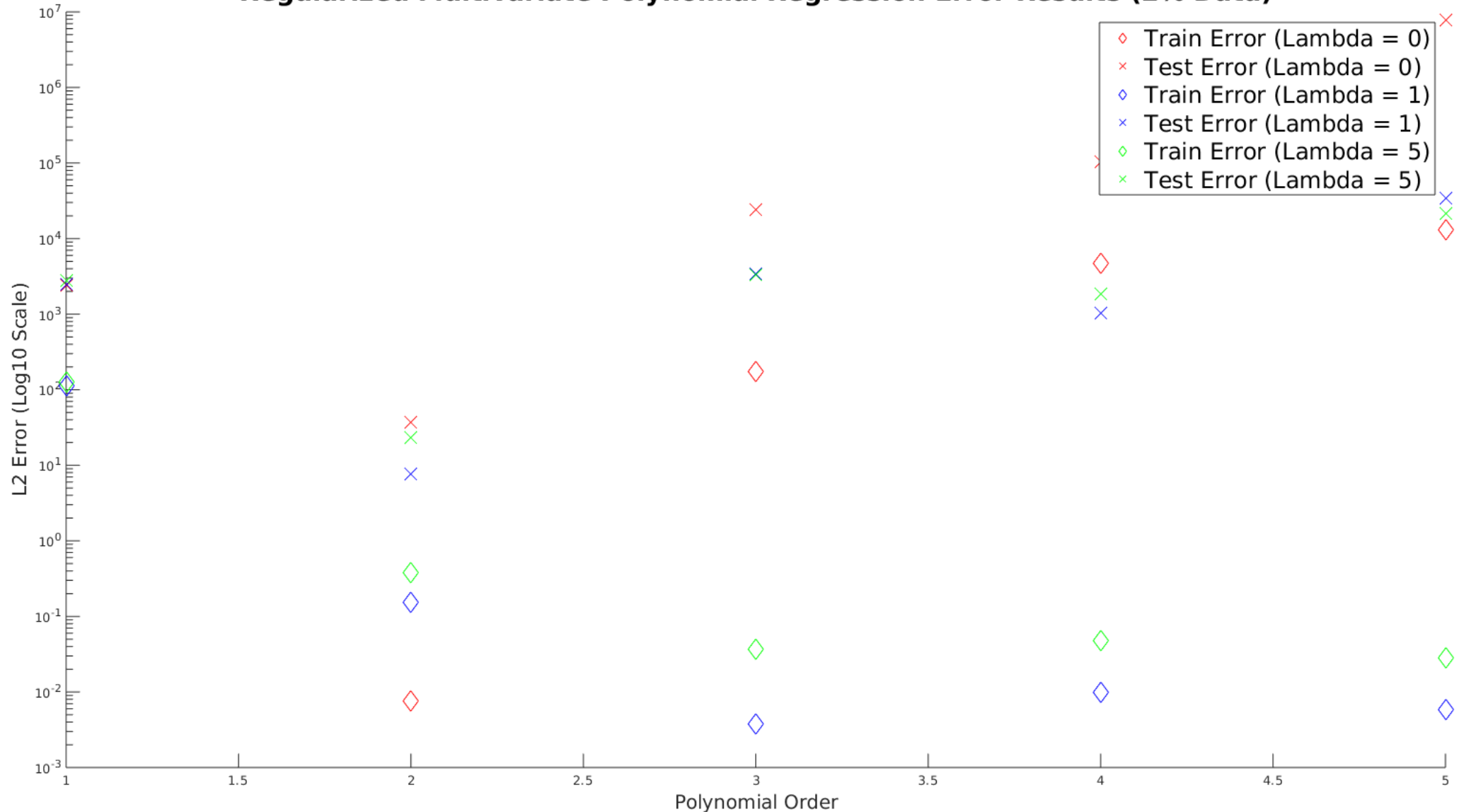**Regularized Multivariate Polynomial Regression Error Results (50% Data)**

Problem 1 (10% Training Data)

Regularized Multivariate Polynomial Regression Error Results (10% Data)

Problem 1 (2% Training Data)

Regularized Multivariate Polynomial Regression Error Results (2% Data)

Problem 2

```
---------------------------------

Theoretical P(c='a'):
        0.1
Frequentist P(c='a'):
     0.1004


---------------------------------
```

Output when 'Run' is pressed

5000 characters

Frequentist approach worked well with large dataset

Problem 3

```
- - - - - - - - - - - - - - - - - - - - - - - - - -
P( m = 0.1 | S) = 0.64299
P( m = 0.3 | S) = 0.084588
P( m = 0.5 | S) = 0.10669
P( m = 0.7 | S) = 0.10125
P( m = 0.9 | S) = 0.064484
P( c = 'a' | S) = 1
- - - - - - - - - - - - - - - - - - - - - - - - - -
```

5000 characters

Posterior values for m displayed

Final row shows the posterior values constitute a valid distribution