ML Lab - Linear Regression

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| --- | --- | --- | --- | --- | --- | --- |
| Midsem(x) | Actual(y) | Predicted (yp) | |y-yp| | (y-yp)2 |  |  |
| 62 | 82 | 66.5701 | 15.4299 | 238.0814 | 8.5714 | 73.4694 |
| 55 | 60 | 61.4782 | 1.4782 | 2.1852 | 13.4286 | 180.3265 |
| 80 | 72 | 79.6635 | 7.6635 | 58.7297 | 1.4286 | 2.0408 |
| 72 | 79 | 73.8442 | 5.1558 | 26.582272 | 5.5714 | 31.0408 |
| 91 | 93 | 87.6651 | 5.3349 | 28.464357 | 19.5714 | 383.0408 |
| 87 | 78 | 84.7554 | 6.7552 | 45.632725 | 4.5714 | 20.898 |
| 53 | 50 | 60.0234 | 10.0234 | 100.472549 | 23.4286 | 548.898 |

This has been continued from the linear regression equation calculation. The equation calculated was:

And

**Training Error Calculation**

Σ (|yi – yi’|) = 51.8412

Σ ((yi – yi’)2) = 500.144

Σ (|yi – i |) = 76.5714

Σ ((yi – i )2) = 1239.7143

Mean Absolute Error = = **7.4059**

Mean Squared Error = = **71.4491**

Relative Absolute Error = = **0.677**

Relative Squared Error = = **0.4034**

Root Mean Squared Error = = **8.4528**

Root Relative Squared Error = = **0.6352**