

Linear Regression

A soft introduction

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Table of contents

1. Introduction
2. Implementation
3. Conclusion

Introduction

Linear regression

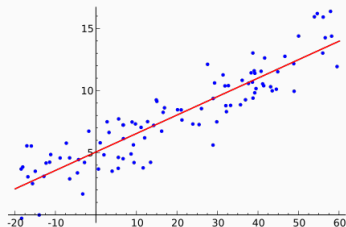
$$y = X\beta + \varepsilon$$

y = response variable (regressand)

X = input vector (regressor)

β = ~weight (regression coefficient)

ε = ~bias (disturbance or error term / noise)



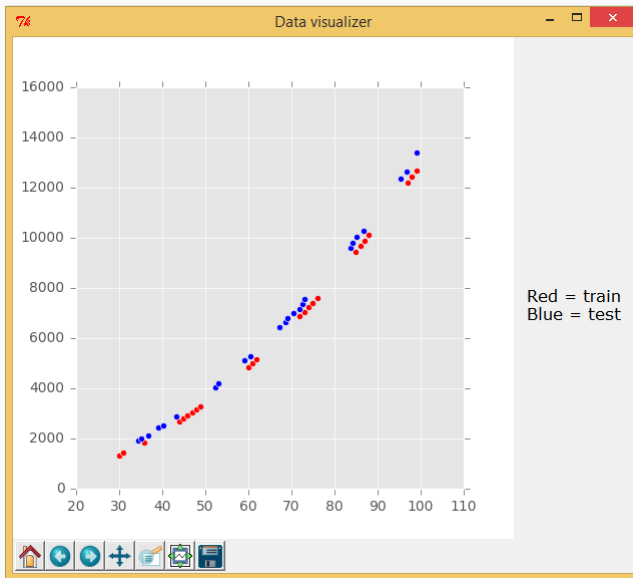
Implementation

Table 1: Insulin data (source: CMU, 2009, ZBJ - HW1 pr4)

For ease, weightage will be the indicator for train/test data.

| bloodsugarlevel | insulindose | weightage |
|-----------------|-------------|-----------|
| 30,000000 | 1335,000026 | 1 |
| 31,000000 | 1421,670027 | 1 |
| 34,500000 | 1909,320033 | 2 |
| 35,250000 | 2007,750035 | 2 |

Visualizing the data

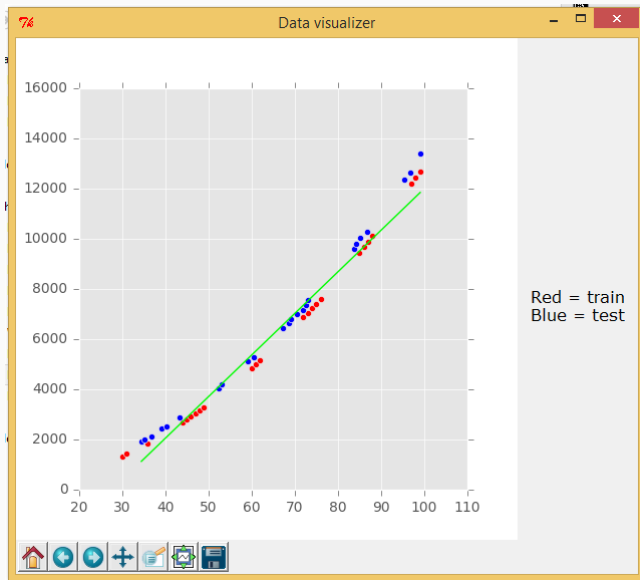


Technologies used



Demo

Visualizing the solution



Conclusion

Get this presentation and the code from

```
github.com/xR86/ml-stuff/tree/master/  
labs-machine-learning/implementations
```

The repo is licensed under a MIT License.

