

**BCS2313 ARTIFICIAL INTELLIGENCE TECHNIQUES**

**SEMESTER I SESSION 2016/2017**

**SECTION 01**

**MINI PROJECT**

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1. **Normalise the car evaluation data with the range of [0, 1], which consist of 6 inputs and 1 output. (Print only the last 15 lines of records)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 0.33 | 1 | 0.5 | 0.5 | 1 | 1 |
| 1 | 0.33 | 1 | 0.5 | 1 | 1 | 1 |
| 1 | 0.33 | 1 | 1 | 0.5 | 1 | 1 |
| 1 | 0.33 | 1 | 1 | 1 | 1 | 1 |
| 1 | 0.67 | 0 | 0.5 | 1 | 1 | 1 |
| 1 | 0.67 | 0 | 1 | 1 | 1 | 1 |
| 1 | 0.67 | 0.33 | 0.5 | 1 | 1 | 1 |
| 1 | 0.67 | 0.33 | 1 | 0.5 | 1 | 1 |
| 1 | 0.67 | 0.33 | 1 | 1 | 1 | 1 |
| 1 | 0.67 | 0.67 | 0.5 | 0.5 | 1 | 1 |
| 1 | 0.67 | 0.67 | 0.5 | 1 | 1 | 1 |
| 1 | 0.67 | 0.67 | 1 | 0.5 | 1 | 1 |
| 1 | 0.67 | 0.67 | 1 | 1 | 1 | 1 |
| 1 | 0.67 | 1 | 0.5 | 0.5 | 1 | 1 |
| 1 | 0.67 | 1 | 0.5 | 1 | 1 | 1 |

1. **Use Heaton Encog Java tool to design a feedforward neural network with activation sigmoid activation function. Train the network using the tool.**

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Figure 1 Summary

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Figure 2 Weights Histogram

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Figure 3 Network Structure

1. **Analyses the RMSE and validate it with the testing dataset.**

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| https://scontent-kul1-1.xx.fbcdn.net/v/t35.0-12/15555139_10154796124379004_34363158_o.png?oh=51cea2326743dd1d676cd732f1527e58&oe=585522B5 |