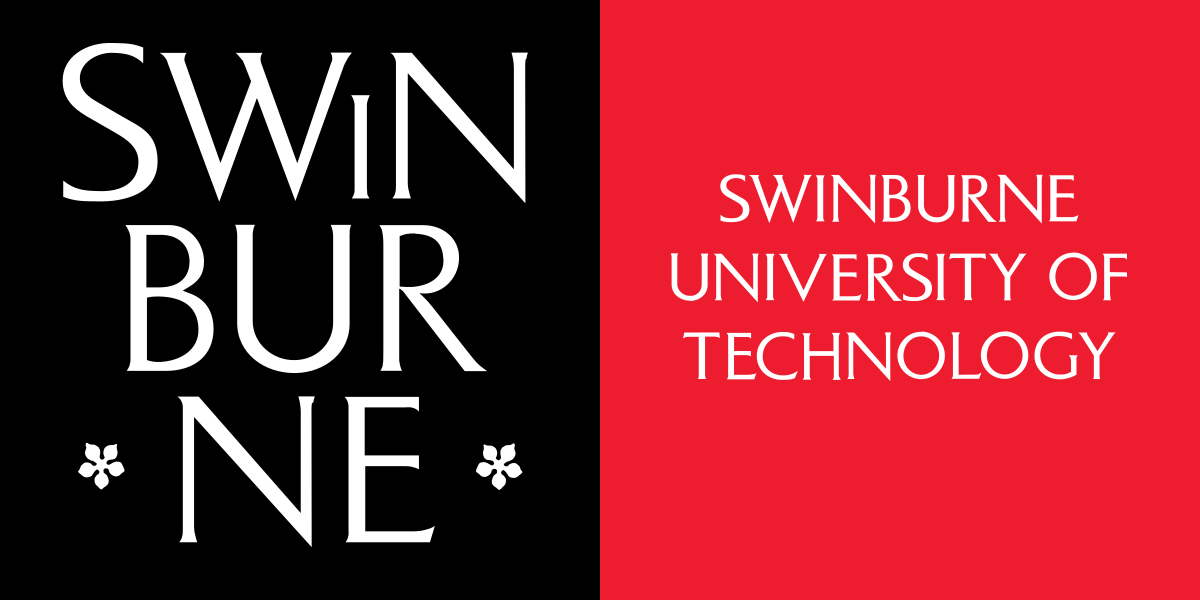
**Course Name:** Artificial Intelligence for Engineering (COS40007)

**Studio Session:** Studio 1 - 7

**Studio Tutor:** Abyan Salam



**Title: Portfolio Assessment 4: “Deep Learning using Tensorflow and Keras”**

**Name:** Ashraf Shahzad Toor

**Student ID:** 104586656

**GitHub Code Link:** <https://github.com/AshrafToor/COS40007_AIE/tree/main/Assessment4>

**Submission Date:** 13-04-2025

**Test outcome of 20 images for CNN model (a table containing true class and predicted class and final overall accuracy)**

|  |  |  |
| --- | --- | --- |
| **Image #** | **True Class** | **Predicted Class** |
| Image 1 | rust | no rust |
| Image 2 | rust | no rust |
| Image 3 | rust | rust |
| Image 4 | rust | no rust |
| Image 5 | rust | rust |
| Image 6 | rust | rust |
| Image 7 | rust | rust |
| Image 8 | rust | rust |
| Image 9 | rust | rust |
| Image 10 | rust | rust |
| Image 11 | no rust | no rust |
| Image 12 | no rust | no rust |
| Image 13 | no rust | no rust |
| Image 14 | no rust | no rust |
| Image 15 | no rust | no rust |
| Image 16 | no rust | no rust |
| Image 17 | no rust | no rust |
| Image 18 | no rust | rust |
| Image 19 | no rust | rust |
| Image 20 | no rust | rust |

**Overall Accuracy: 70%**

**Test outcome of 20 images for RestNet50 model (a table containing true class and predicted class and overall accuracy)**

|  |  |  |
| --- | --- | --- |
| **Image #** | **True Class** | **Predicted Class** |
| Image 1 | rust | no rust |
| Image 2 | rust | rust |
| Image 3 | rust | no rust |
| Image 4 | rust | no rust |
| Image 5 | rust | rust |
| Image 6 | rust | no rust |
| Image 7 | rust | no rust |
| Image 8 | rust | rust |
| Image 9 | rust | rust |
| Image 10 | rust | rust |
| Image 11 | no rust | no rust |
| Image 12 | no rust | no rust |
| Image 13 | no rust | rust |
| Image 14 | no rust | rust |
| Image 15 | no rust | rust |
| Image 16 | no rust | rust |
| Image 17 | no rust | rust |
| Image 18 | no rust | no rust |
| Image 19 | no rust | no rust |
| Image 20 | no rust | no rust |

**Overall Accuracy: 50%**