Project Assessment Evaluation

For an Intrusion Detection System using a Neural Network

Version 1.0

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1   Introduction

This document will provide the assessment of the test cases that were performed on the PyIDS application. The test that were conducted were outlined in the Test Plan document. The unit test code is a part of the package diagram and the System Test document lays out the exact steps taken when performing the GUI testing portion of the test.

2   Test Case Summary Results

The results of Test Cases outlined in the Test Plan document are as follows:

#	Requirement(s)	Test Name	Time (sec)	Result
1	SR4.1	test_DR_getDataArray	11	PASS
2	SR4.1	test_DR_getFullDataArray	15	PASS
3	SR4.1	test_DR_readData	11	PASS
4	SR3.1, SR4.1	test_NN_determineMalicious	11	PASS
5	SR3.1, SR4.1	test_NN_trainAndCompute	12	PASS
6	SR1.1	test_NTR_getNextPacket	6	PASS
7	SR2.1	test_NTR_getSinglePacket	5	PASS
8	SR5.1, SR6.1	System Test	N/A	PASS

3   Test Case Details

This section will layout each of the detailed results from the different testing scenarios.

1. **Test Case 1: Read Data Array**
    - Requirement(s): SR4.1
    - This test passed as expected. The unit test shows that the system was able to read in the data appropriately.

2. **Test Case 2: Read Full Data Array**
    - Requirement(s): SR4.1
    - This test passed as expected. The unit test shows that the system was able to read in the full data appropriately.

3. **Test Case 3: Read Data**
    - Requirement(s): SR4.1
    - This test passed as expected. The unit test shows that the system was able to read in the data appropriately and package it to a useful form.

4. **Test Case 4: Malicious Packet Detection**
    - Requirement(s): SR3.1, SR4.1
    - This test passed as expected. The unit test shows that the system was able to train on the data that was read and detect a malicious packet.

5. Test Case 5: Neural Network Training

- Requirement(s): SR3.1, SR4.1
- This test passed as expected. The unit test shows that the system was able to train the neural network and receive the minimum required accuracy rating.

6. Test Case 6: Receive Packet

- Requirement(s): SR1.1
- This test passed as expected. The unit test shows that the system was able to receive a packet and read it into the system.

7. Test Case 7: Get Single Packet with Data

- Requirement(s): SR2.1
- This test passed as expected. The unit test shows that the system was able to read a packet from the card and store the useful information into a data structure useful for the system.

8. Test Case 8: System Test

- Requirement(s): SR5.1, SR6.1
- This test passed as expected. The unit test shows that the system was able to create notifications and log information appropriately.

4 Summary

Overall, all of the test cases passed and did not take an exceptional amount of time. This should indicate that the system is working acceptably and as intended.