National College of Ireland

Configuration Manual

MSc Research Project
MSc Cybersecurity

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School of Computing
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MSc Project Submission Sheet

School of Computing

Student Name:	Chinedu Nelson Egwu
Student ID:	X23258608
Programme:	MSc Cybersecurity **Year:** 2025
Module:	Research Project
Lecturer:	Michael Pantridge
Submission Due Date:	29-01-2025
Project Title:	ENHANCING INTRUSION DETECTION SYSTEMS (IDS) USING MACHINE LEARNING TECHNIQUES: A COMPARATIVE STUDY OF DEEP LEARNING AND CLASSICAL MACHINE LEARNING METHODS FOR IMPROVED DETECTION ACCURACY AND SPEED
Word Count:	95 **Page Count:** 1

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ALL internet material must be referenced in the bibliography section. Students are required to use the Referencing Standard specified in the report template. To use other author's written or electronic work is illegal (plagiarism) and may result in disciplinary action.

Signature:	Chinedu Nelson Egwu
Date:	29th January 2025

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This project involves building an intrusion detection system using a dataset obtained from kaggle. The manual provides configuration and setup instructions to replicate the project in Jupyter notebook

1.0. System requirements: Operating
System: Windows OS Python
Version: Python 3.10.

2.0. Software requirements

- Jupyter Notebook
- NumPy 1.21.0
- Pandas 1.3.0
- Scikit-learn 0.24.2
- Matplotlib 3.4.2
- TensorFlow 2.6.0

Installation command: pip install numpy pandas scikit-learn
matplotlib tensorflow

Reference

WSN-DS: A dataset for intrusion detection systems in wireless sensor network: [online] Available: https://www.kaggle.com/datasets/bassamkasasbeh1/wsnds/data. Accessed on:18 Oct 2024.