

# Configuration Manual

MSc Research Project  
Programme Name

Harsha Vardhan Masina  
Student ID: 20196075

School of Computing  
National College of Ireland

Supervisor: Michael Pantridge

**National College of Ireland**  
**MSc Project Submission Sheet**  
**School of Computing**



**Student Name:** Harsha Vardhan Masina  
**Student ID:** 20196075  
**Programme:** MSc in Cybersecurity **Year:** 2022  
**Module:** Research Project  
**Lecturer:** Michael Pantridge  
**Submission Due Date:** 19/09/2022  
**Project Title:** An approach to detect stegomalware in an image using machine learning  
**Word Count:** 449 **Page Count:** 3

I hereby certify that the information contained in this (my submission) is information pertaining to research I conducted for this project. All information other than my own contribution will be fully referenced and listed in the relevant bibliography section at the rear of the project.

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:** Harsha Vardhan

**Date:** 19/09/2022

**PLEASE READ THE FOLLOWING INSTRUCTIONS AND CHECKLIST**

Attach a completed copy of this sheet to each project (including multiple copies)	<input type="checkbox"/>
<b>Attach a Moodle submission receipt of the online project submission,</b> to each project (including multiple copies).	<input type="checkbox"/>
<b>You must ensure that you retain a HARD COPY of the project,</b> both for your own reference and in case a project is lost or mislaid. It is not sufficient to keep a copy on computer.	<input type="checkbox"/>

Assignments that are submitted to the Programme Coordinator Office must be placed into the assignment box located outside the office.

<b>Office Use Only</b>	
Signature:	
Date:	
Penalty Applied (if applicable):	

# Configuration Manual

Harsha Vardhan Masina  
20196075

## 1 Introduction:

This article will provide how the implementation is done and execution on the system. The models that are implemented and created to detect the malware in a system and it will detect the malware in a large amount. In this section will discuss how to configure the system and run the model which was proposed in the system. The proposed model performed well and achieved good percentage of accuracy because of datasets which was used as large amount. In the below sections mentioned that how to install the software and version of the system so that the model is compatible and performed successfully.

## 2 Configuration of system:

The details which are mentioned below the requirements software and hardware which are implemented used for the model

### 2.1 Hardware Configuration:

OS Name: windows 11 home single language

System type: x64-based PC

processor 11th Gen core(TM) i7 malicious

RAM:16.0 GB

### 2.2 Software Configuration:

In this section involves the details of the software which needs to be installed before implementing the model and their performance.

Technology used	Version	Illustration
Python	3.10	Python is the programming language which is used create the model and performace of the model.
Anaconda navigator	2.1.1	Anaconda is one of the open source in this many of IDE which is related to the data science are avaiable on open source.
Spyder	2.57	Spyder tool is used because of it gives live output and better performce of work and also visualization.

## 3 Installations

In this section will explain the details about how to install software in step-by-step process is explained in below.

### 3.1 Python installation

3.10 is the latest version of python programming and it is available in their official website and you can able to download and any version of systems are compatible it has 32-bit or 64-bit.

The screenshot shows the Python.org website's download page for Windows. It includes a navigation bar with links like 'About', 'Downloads', 'Documentation', 'Community', 'Success Stories', 'News', and 'Events'. A prominent heading reads 'Download the latest version for Windows' with a button to 'Download Python 3.10.6'. Below this, there are links for other operating systems and development versions. A table titled 'Active Python Releases' provides details on various versions.

Python version	Maintenance status	First released	End of support	Release schedule
3.10	bugfix	2021-10-04	2026-10	PEP 619
3.9	security	2020-10-05	2025-10	PEP 596
3.8	security	2019-10-14	2024-10	PEP 569
3.7	security	2018-06-27	2023-06-27	PEP 537
2.7	end-of-life	2010-07-03	2020-01-01	PEP 373

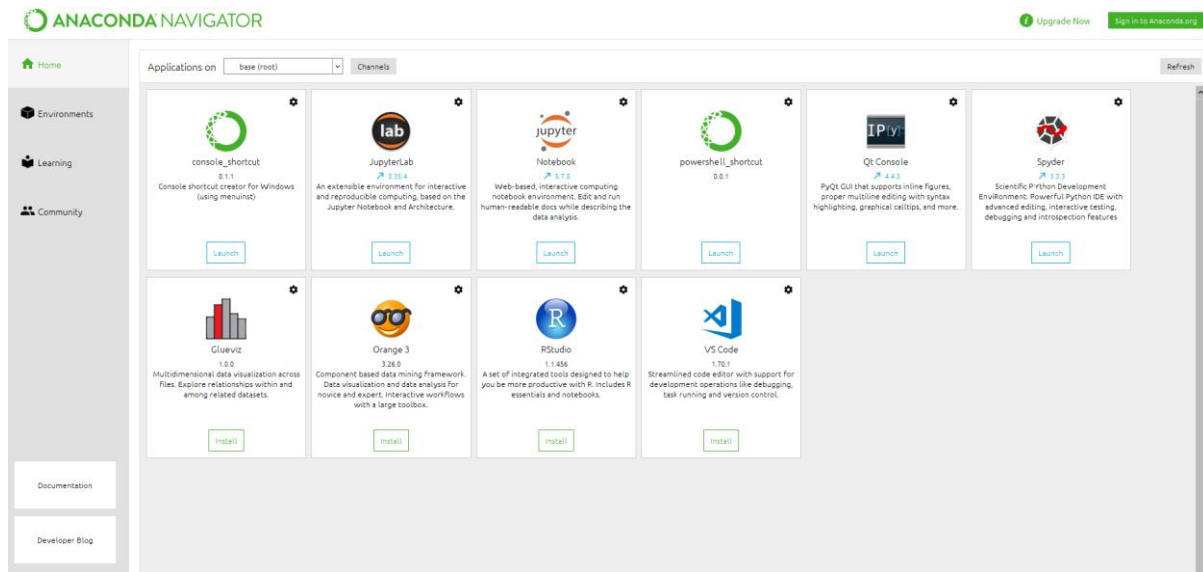
### 3.2 Anaconda navigator:

In this anaconda software is open source and you can be able to download from their official website and have to registration for downloading the tool in their respective systems. The below figure shows the any version of OS that can install anaconda.

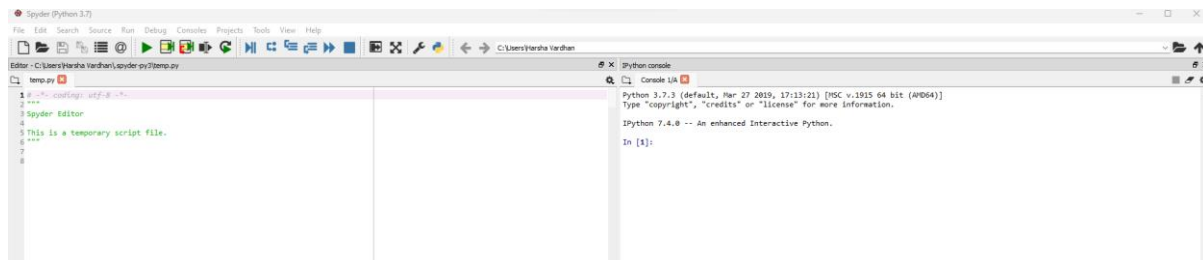
The screenshot displays the 'Anaconda Installers' page, organized by operating system: Windows, MacOS, and Linux. Each section lists available Python versions (e.g., Python 3.9) and provides links to different installer types such as '64-Bit Graphical Installer' or '64-Bit Command Line Installer', along with their respective file sizes in MB.

### 4. Working:

In this section will explain implementation of the tool in the beginner perspective. Step1: Run the software of anconda tool which shows in the below figure.



Step2: Click on the spyder which is in 6<sup>th</sup> from the left and below figure show that interface of spyder.



Step 4: After implementation of the spyder now the coding part has started before that we have to built the model and train the model with the datasets for that we need to import some important packages. The figure which show below the details of the packages had been intall in the language of python.

```

1 import numpy as np
2 import matplotlib.pyplot as plt
3
4 from tkinter.filedialog import askopenfilename
5 from tensorflow.keras.models import Sequential
6
7 from skimage.io import imshow
8 from skimage.feature import hog
9
10 import os
11 import argparse
12
13 from tensorflow.keras.models import Sequential
14 from sklearn.model_selection import train_test_split
15
16 from tensorflow.keras.layers import Conv2D,MaxPooling2D,Flatten,Dense, Dropout
17
18 from skimage.transform import resize
19 import matplotlib.pyplot as plt

```