

# Configuration Manual

MSc Research Project Programme Name

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## Configuration Manual

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### **1** Configuration Manual Introduction

This manual is intended to provide a comprehensive guide to installing and configuring the software application known as Pyton, Google Collab. This guide will walk you through the entire process from start to finish, covering topics such as system requirements, installation, configuration, and troubleshooting. Additionally, it will provide helpful tips to ensure that your installation and configuration are successful.

### 2 Hardware detail

Hardware is the physical components of a computer system, such as the central processing unit (CPU), memory, storage devices, network cards, motherboards, and other components. Below are the details used in this project



Figure 1: Hardware details

### 3 Software details

Below are some details for the software used in this project

- Programming Language Python
- Cloud IDE Google Collab
- Local IDE Jupyter Notebook

#### 3.1 Software Install

Download and install latest version on Anaconda version Website : https://www.anaconda.com/products/distribution/start-coding-immediately

### 4 Implementation

#### 4.1 Configuration Using Google Collab

- 1. Sign in to your Google account and go to Google Colab.
- 2. Create a new notebook or open an existing one.
- 3. In the Colab toolbar, select Runtime ¿ Change runtime type and choose the type of instance you want to use.
- 4. Select the GPU or TPU hardware accelerator you want to use.
- 5. Click "Save".
- 6. Install the necessary libraries and packages.
- 7. Install any libraries you need for your project.
- 8. Upload or download any data or files you need.
- 9. Start coding and running your project.
- 10. When you're done, select File Download .ipynb to save your notebook.



Figure 2: Mount to Drive

Google Colab has mounted the Google drive. The drive path has been optimized, and the YoloV3- Darknet model has been replicated. The GPU and OpenCV are enabled in Google Colab to fully utilize GPU Hardware acceleration, and the Darknet model building process is initiated. The files are copied to the YoloV3 folder from the darknet.

Also do the same for Yolov5, save it for Yolov5 folder We are installing the latest version of the following libraries:

- Pandas
- Glob
- Matplotlib
- Seaborn