**CHAPTER 3**

**SYSTEM REQUIREMENTS**

| 3.1HARDWARE REQUIREMENTS | |
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| * Memory | : 4 GB |
| * CPU | : AMD PRO |
| * File size | : 2 GB |
| * OS | : Windows 10 |

3.2 SOFTWARE REQURIMENTS

* Operating System : Windows 10
* Software Tool : Google COLAB
* Coding Language : Python
* Dataset Library : Kaggle

**Colab Python**

These are the most important and key features of python as programming language and the python can be applied in the different types of environments.

Colab stands for the colaboratory which is a product from the Google Research. It is a free of charge to use the resources including the GPU’S .The resources in Colab are prioritized for the interactive use cases.

By using Colab we can share the Jupyter notebooks with others without downloading or installing or running. Anything colab notebooks are stored in Google drive or can be loaded from the Github. The uploaded file in the colab are removed When the Session is restarted because the Google colab does not provide a provide a persistent storage facility.

The disadvantages may include it supports only for the python language there is no way that one can add their own python package It is not suitable for the specialization ,Closed environment ,Repetitive Tools and also the no-live editing The advantages are we can share our notebook to Google drive

Python is a highly used general-purpose programming language with a variety of applications. It has high-level data structures, dynamic type, dynamic binding, and many other capabilities that make it suitable for both complex programme development and scripting or "glue code" that connects components. It can also be extended to make system calls to nearly all operating systems and run C or C++ code. Python is a universal language used in a variety of applications due to its ubiquity and ability to operate on practically every system architecture. As python language is easy to understand it is used to build machine learning models.

Python can be applied in the real world applications such as in the field of Web development, Data science, Artificial Intelligence, Machine Learning, Enterprise Applications, Game development and also as well as the software development

Python has the capability to be open in different software tools such as the Colab, Jupyter notebook. It consists of the different data types namely Python numeric data type is used to store the numeric characters and python string data type is used to store the sequence of characters In python the tuple consists of an the Ordered set of values.

Python is also utilised in other applications. Robotics, web scraping, scripting, artificial intelligence, data analysis, machine learning, face detection, colour detection, 3D CAD applications, console-based applications, audio-based applications, video-based applications, enterprise applications, and applications for images are some of the other applications for which Python is used.

**Kaggle**

Kaggle is a part of Google LLC is an online community of data scientists and machine learning practioners. Kaggle allows users to find and publish data sets, explore and built models in a web-based data-science environment work with other data scientists and machine learning engineers and enter competitions to solve data science challenges.

Kaggle is a cloud-based workbench for data science and Artificial Intelligence education. Several academic papers have been published on the basis of findings made in Kaggle competitions.

The aim of this platform is to help professionals and learners reach their goals in their data science journey with the powerful tools and resources it provides.