National College of Ireland

Rockfall Detection on Mars using Deep Learning Algorithm

MSc Research Project
Data Analytics

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MSc Project Submission Sheet

School of Computing

Student Name: ……. …Soumi Dutta Bhowmik……

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Programme:……Msc Data Analytics… **Year:** …2021-2022..

Module: ……Research Project……..……

Supervisor: ……Christian Horn……..……

Submission Due Date: ……15/08/2022……..……

Project Title: ……Rockfall Detection on Mars Using Deep Learning……..……

Word Count: ……142…… **Page Count**…2……..……..

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Configuration Manual

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1 Introduction

This document delivers all the information related to required hardware, software details while running the project and installation of all those tools. It gives information about the programming language used in this project, any third-party library or package was required or not. If yes then installation of it. This is a manual guide document which helps anybody to install and execute this project at their own.

2 System Configuration

2.1 Hardware Specification

```
Filesystem      Size  Used Avail Use% Mounted on
overlay         226G   38G  189G  17% /
tmpfs            64M     0   64M   0% /dev
shm             5.8G     0  5.8G   0% /dev/shm
/dev/root       2.0G  1.2G  812M  59% /sbin/docker-init
tmpfs           6.4G   28K  6.4G   1% /var/colab
/dev/sda1       233G   40G  193G  18% /etc/hosts
tmpfs           6.4G     0  6.4G   0% /proc/acpi
tmpfs           6.4G     0  6.4G   0% /proc/scsi
tmpfs           6.4G     0  6.4G   0% /sys/firmware
```

2.2 Software Specification

Libraries	**Version**
Python	3.7.13
matplotlib	3.2.2
Numpy	1.21.6
Pandas	1.3.5
sklearn-pandas	1.8.0
google-colab	1.0.0
tensorflow	2.8.2
Pillow	7.1.2
albumentations	1.2.1

2.3 Connecting Colab with Driver

For data importation this step is required. Firstly, locally downloaded dataset should be uploaded to the google driver. Then run the below code to fetch the data from driver to the python program.

```
[2]  from google.colab import drive

     drive.mount('/content/drive', force_remount=True)

     Mounted at /content/drive
```