

# COMP1204: Data Management

## Coursework One: Hurricane Monitoring

Chak Tim Lam  
34409823

January 15, 2025

### 1 Introduction

As a data scientist for the National Oceanographic and Atmospheric Administration Centre. assigned to the tropical cyclone tracking team.

#### 1.1 Aim

The aim of this report is to extract storm data from tropical cyclone reports and extract the data to produce maps of where the storm will be. I will be writing scripts to get the right output of data and generate the corresponding maps and using git to track the progress of the script.

### 2 Create CSV Script

The CSV script I have created consist of the usage of basic UNIX commands for text processing and data cleaning techniques using pattern matching and filtering. In the csv file, I have scripted out a header for the data types, and then i used grep to find out the data with patterns of their data type, then I used sed to substitute the opening bracket to empty and then substitute the closing brackets to the digits and commas. Once the output of data is done, I used paste to group the data from the same time to the same line. Then at last it shows that the output are converted to the storm info file.

### 3 Storm Plots

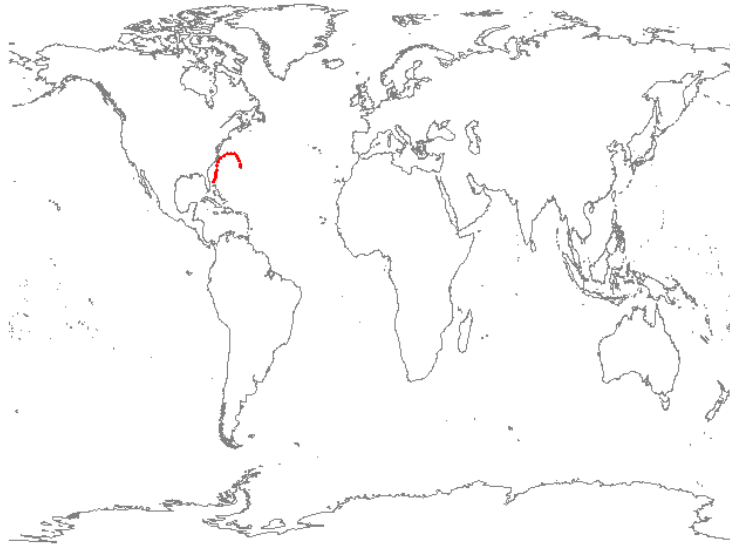


Figure 1: al012020 map



Figure 2: al102020 map

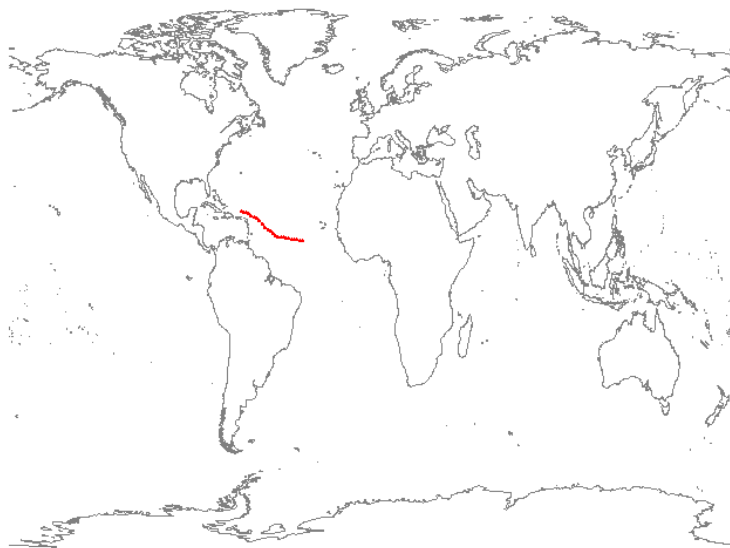


Figure 3: al12020 map



Figure 4: al122020 map

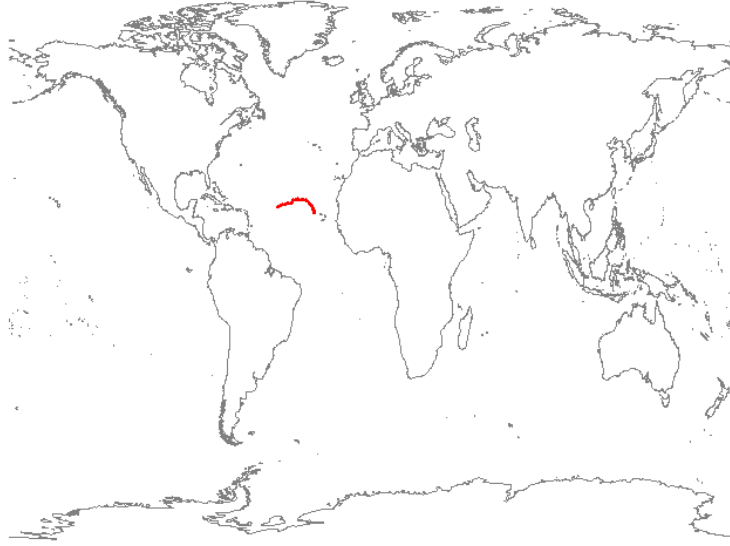


Figure 5: al212020 map

## 4 Git usage