**CCT College Dublin**

**Assessment Cover Page**

| **Module Title:** | Advanced Data Analytics, Big Data Storage and Processing |
| --- | --- |
| **Assessment Title:** | A Time-series Forecast of Tweet Sentiment Scores. |
| **Lecturer Name:** | David McQuaid, Dr. Muhammad Iqbal |
| **Student Full Name:** | Paul Ryan |
| **Student Number:** | sbs23013 |
| **Assessment Due Date:** | 10/11/2023 |
| **Date of Submission:** | 10/11/2023 |
| **Word Count** | 3 |
| **GitHub Repository** | https://github.com/paulr28/.git |

**Declaration**

| By submitting this assessment, I confirm that I have read the CCT policy on Academic Misconduct and understand the implications of submitting work that is not my own or does not appropriately reference material taken from a third party or other source. I declare it to be my own work and that all material from third parties has been appropriately referenced. I further confirm that this work has not previously been submitted for assessment by myself or someone else in CCT College Dublin or any other higher education institution. |
| --- |

**Abstract**

**Keywords:**

**Introduction**

**Materials**

Data Source / Initial Loading

*Data Source*

*Initial Loading*

Database Comparison Materials

**Methods**

Database Comparison

Sentiment Analysis

*MySQL Loading*

*Processing*

*Apache Hive Storage*

EDA

Time Series Analysis

*Data Processing*

*ARIMA Model Overview*

*Time Series Analysis*

*Hyperparameter Tuning*

*Forecaster Model Overview*

*Time Series Analysis*

*Hyperparameter Tuning*

Interactive Dashboard

*Overview / Data Processing*

*Dashboard*

**Results**

Database Comparison

Figure 1: Choropleth of non-seasonally adjusted IS-HWI, Europe, Q1 2010 (Source: europa.eu/eurostat)

Figure 2: Histogram of IS-EPI faceted by seasonal adjustment, Ireland, (Source: europa.eu/eurostat)

Figure 3: Boxplots of Value Indexes, Ireland, (Source: europa.eu/eurostat)

Sentiment Analysis

*EDA*

*Visualisations*

Time Series Analysis

*ARIMA Model Results*

*Time Series Analysis*

*Sentiment Predictions*

*Forecaster Model Results*

*Time Series Analysis*

*Sentiment Predictions*

Interactive Dashboard

*Overview / Data Processing*

*Dashboard*

**Discussion**

Databases

Data Processing

Sentiment Analysis

Time Series Analysis / Forecast

**Conclusion**

**References**