**CCT College Dublin**

**Assessment Cover Page**

*To be provided separately as a word doc for students to include with every submission*

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| **Module Title:** | Programming for DA,  Statistics for Data Analytics,  Machine Learning for Data Analysis,  Data Preparation & Visualisation |
| **Assessment Title:** | CA2 |
| **Lecturer Name:** | Marina Iantorno  Muhammad Iqbal  David McQuaid |
| **Student Full Name:** | Rita Raher |
| **Student Number:** | sbs22115 |
| **Assessment Due Date:** | ?? |
| **Date of Submission:** | ?? |

Icon

Description automatically generated with medium confidence

**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

Some text

# Introduction

Some text

# Methodology

Some text

The project was tracked using Github account <https://github.com/RitRa/Msc_CA2>

# Data Collection

Some text

Data for fertiziler was collected from CSO

Data for potassium chloride was collected from

<https://www.indexmundi.com/commodities/?commodity=potassium-chloride&months=240&currency=eur>

potassium\_chloride\_price

Rock phosphate

<https://www.indexmundi.com/commodities/?commodity=rock-phosphate&months=360&currency=eur>

Fertilizer production require large amounts of gas

Find gas

Twitter

Part of this project is to analysis sentiment related to agriculture. One of the best places to find out what the general population are thinking is twitter. One way to gain access to tweets, is by using a developer account. This will give you api key, api key secret, access token and access token secret. To get elevated access to twitter you need to explain what you are doing with the tweets. gives you access to 2M Tweets per month / Project. There is a python library called tweepy which allows for easy access to the the twiiter api. Unfortunately twiiter only allows access to 5-7 days of tweets or 1,500 tweets in total so the total number of tweets was only 9, not enough for the project. Snscrape is a python web scraper for social networking services which allows you to add search criteria and gives back tweets without the restrictions of others like Tweepy. Specific keywords were targeted for focus on agriculture, they included: #farmers, Fertiliser, #farming, #agriculture, farm and each search criteria included near dublin to try and collected tweets in Ireland.

# Data understanding

Some text

# Data preparation

Some text

# Modelling

Some text

# Evaluation

text

# Conclusion

text

Add bib

Article

<https://www.irishtimes.com/news/ireland/irish-news/price-of-fertiliser-doubles-for-farmers-with-knock-on-anticipated-in-food-prices-1.4827498#:~:text=Office%20(CSO).-,Fertiliser%20prices%20rose%20by%20127.2%20per%20cent%20since%20January%202021,output%20and%20input%20price%20indices>.

<https://www.irishexaminer.com/farming/arid-40829501.html>

**Fertiliser prices rose by 127.2 per cent since January 2021**

What is causing the increase?

<https://asmith.ucdavis.edu/news/story-rising-fertilizer-prices>

is it caused by Russia invasion?

Check the dates of when it jumped?

Look into what makes up fertilizer

Check scientific papers

Have the prices for those gone up?

<https://www.tfi.org/the-feed/fertilizer-101-big-3-nitrogen-phosphorus-and-potassium>

price for potassium

<https://www.indexmundi.com/commodities/?commodity=potassium-chloride&months=360>

<https://www.agweb.com/news/crops/corn/phosphate-prices-hit-highest-level-2012-nitrogen-prices-also-climb>

Fertiliser

<https://data.cso.ie/table/AJM05>

<https://www.cso.ie/en/statistics/>

<https://www.agriland.ie/farming-news/fertiliser-prices-impact-farmers-and-consumers-mcguinness/#:~:text=The%20spiraling%20cost%20of%20fertiliser,(CAN)%20and%20urea%20fertilisers>.

Milk prices

Diesel

Grain

API Key

wMdUP2fc4d6gqTO8qH41IeRrY

API Key Secret

jCuvCMrT9FkPSyC1uhULfW8OYYnjqyl8RgcTLbI2ZNNnRugzIi

Bearer Token

AAAAAAAAAAAAAAAAAAAAACxWbwEAAAAAjouhYAFZU%2F7F3oR77ehZpoJW%2BWA%3DXO8JMqLbPBYSguAjwxseQ12y2xD8UBZVFN1tp3eawiRiLBY2sM

Access Token

1316278477-pItksAj8B9db1uGZmIu1jaINhP5f1Jl6TRc0vNM

Access Token Secret

MDDB6LsUHWr2ig46UGPGbNzqGMvGaD8Id1oUT8sVbowvY

Ideas for sentiment

positive and negative sentiment

<https://developer.twitter.com/en/portal/products/elevated>

gained elevated access to twitter api access

tweeps -

https://ec.europa.eu/eurostat/databrowser/view/T2020\_RN310/bookmark/table?lang=en&bookmarkId=0c6ee6ae-b496-4703-a0dd-66b2b2fc8184