4th Year Project X00137773

Research Proposal

A Exporalitive Look into crop production the factors affecting

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Project Summary.

## Background

As world population continues to grow at a exponential rate so does its demand and need for resources, of these reasources agriculture is a vital key stone which is need to further our growth as a spieces, that is why the purpose of this of this project is to provide an insight into crop production and factors affecting It.

Aswell as highlighting valuable details to gain insight into the market of specific crops and their production.

This will be done by me using current datasets on crop from the past few decades aswell as complamentary and performing key data analysis methods and techniques to this data.

## Objectives

1. Time Scale Analysis
2. Predictive Model
3. Comparison Analysis Between Different crops
4. Statistical Analysis
5. Regression Analysis
6. Regression Model

## Prototyping & Testing

## Regression Analysis :

## Data Requirement

The attributes of this are.

1. Type of Crop
2. Total Production
3. Average Rainfall that Year
4. Average Temp that Year
5. GDP per yer
6. Crop market value data set
7. C02 emissions
8. Market Demand data set

The proposed dataset to be used is a Met eireann rainfall dataset 1711 - 2016 Rainfall ( Ireland ), Crop Yield 1985 - 2007 and Crop Yield 2007 - 2019, CO2 emissions Metric Tons, Population Growth %, Agricultural Land (sq. Km), : Fertilizer Consumption ( kilograms Per Hectare Of Arable Land ), Temp Grid

## Risk Assessment

Sample size of complementary data might not be enough to draw feasibe info from,

The Scope of the project might might be swayed during the duration of it.

Project Methodology

Introduction:

Agriculutural development has and will abe crucial to the human race development as it enables us to sustain ourself. As we conintue to develop as race we put a huge strain on both our agriculture and enviromment and with modern agricultural techniques proving to be less and less effect as as development continues a changes are needed to reduce the environment footprint, crop yields, crop conditions and the profitability of the crops being sold

## Project Approach

* Identify user/ market needs:
* Analysis of user needs and solutions :
* Design a solution or test available solutions :
* Implement and deploy the solution(s) in order to meet requirements:
* Test (and/ or compare) the solution(s) – does it meet requirements and objectives? :
* Modify design and/ or solution then test again for generalizability.
* Report findings.:

# Project Plan

## Project Phases

Phase 1 Research:

Phase 2 Development:

Phase 3 Outcomes and Presentation:

## 

## Deliverables and Milestones

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| Task | Start | End | Duration |
| Phase 1 Research |  |  |  |
| Task 1.1 Idea | 12 October 2020 | 26 October 2020 | 14 |
| Task 1.2 Final Idea | 26 October 2020 | 02 November 2020 | 7 |
| Task 1.3 Research Draft | 02 November 2020 | 09 November 2020 | 7 |
| Task 1.4 Research | 09 November 2020 | 07 December 2020 | 28 |
| Phase 2 Development |  |  |  |
| Task 2.1 Data Set Selection and Preparation | 07 December 2020 | 25 January 2021 | 49 |
| Task 2.2 Data Pre-processing | 25 January 2021 | 01 March 2021 | 35 |
| Task 2.3 Model Development | 01 March 2021 | 22 March 2021 | 21 |
| Phase 3 Outcomes and Presentations |  |  |  |
| Task 3.1 Performance and Model outcome | 22 March 2021 | 12 April 2021 | 21 |
| Task 3.2 Final Documents and Uploads | 12 April 2021 | 26 April 2021 | 14 |
| Task 3.3 Presentations | 26 April 2021 | 26 April 2021 | 0 |

## Gantt Chart

Chart

Description automatically generated

# Conclusion:

# Bibliography/Reference