FORMATIVE/SUMMATIVE ASSIGNMENT
ASSIGNMENT 4

Due: Proggressive deadline

Objective
- To practice the elements of applying AI and machine learning to solve real world problems in the transport industry.

Format:
- Word document or PDF document

Assignment due date:
- Proggressive
- Assignment to be submitted via Google classroom

Rules:
- This is an individual assignment to be submitted on the due date.
- Any form of dishonesty in the form of cheating, plagiarism will attract a penalty of a score of zero.
- **Your assignment submission should be named your_email_username_assignment_4.doc(pdf). E.g cwanziguya_assignment_4.pdf**
- **YOUR WRITE UP SHOULD BE A MINIMUM OF 2 PAGES**

Open study assignment
Your study should be based on publicly available data and explained using facts backed by available data. Explain assumptions made and your preferred methodology to use. In this study, you will establish whether there is a relationship or trend in a given indicator (section of your choice).

For example, you could choose to study whether there is a relationship between road users, increase in corruption rates and road traffic accidents in a country of your choice (Preferably an African country). For this study, you can refer to datasets from the World Health Organization data for road traffic deaths per country distributed by the various road users and the World Bank indicators for overall traffic deaths per year. Also for this exercise, you may need to relate the traffic deaths to the corruption and accountability index (from the world bank). Feel free to include any other dataset you think supports your study.

Objective:
Based on the example given, the study objectives could be:

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- To establish which of the various road users stands the greatest risk of death as per the country chosen.
- Identify the correlation between corruption and accountability index to the accidents experienced.
- Identify the trends that you may have noticed and state what your conclusions are.

Assignment statement:

Compose a proposal stating:

- What your study is. This should entail:
    - This should entail what the problem is
    - What you intend to do to solve this problem (**Note, this is not the evaluation of what you do, but just what you intend to investigate and implement in this project**).
    - The assumptions (hypothesis) that you have so far in regards to the problem identified

Proposal segments

Your proposal should contain the following sections:

1. **INTRODUCTION**
    a. **Background:**
       Mention the study that you intend to perform and explain why this is a good area for you to study.
2. **OBJECTIVES**
    a. **Main objective:**
       State what your main objective is for example it could be; "to study if there is a relationship between population happiness index and corruption in the country of Wakanda."
    b. **Other objectives:**
       Highlight if there are other objectives to be achieved by this study.
3. **RESOURCES:**
    a. **Methodology:**
       Describe the methods/techniques/tools that you will be using in this study. This should linclude any libraries, functions and any other approaches that will aid your study.
    b. **Datasets:**
       Identify what datasets that you intend to use for the study and an explain why they are significant to the study.
          i. Explain why you think that the selected dataset is ideal for achieving the objectives highlighted.
4. **HYPOTHESIS**
    a. **Assumptions:**
       List what you expect from the study. For example, it could be that; "The lower the corruption index, the more the road users and consequently fewer accidents and generally

a happier pupulation in Wakanda."