The Ingkoders

Members:

- **Cordova, Joesant**
- **Dumindin, Jireh Xaris S.**
- **Galceran, Rozel C.**
- **Saraus, Denzel Vohn**

PROGRESS REPORT

PROJECT OVERVIEW

A study analyzes the potential of machine learning to anticipate academic student results through analyzing behavioral and study-related data. The capacity to learn represents the main academic success indicator but numerous non-intellectual elements including sleep duration and study hours and time management and class participation function as crucial decision factors. Teachers regularly miss these unobvious behavioral signs although they might indicate which students face the risk of academic failure.

The precise recognition of students at risk together with factor analysis about behavioral elements enables educational institutions to furnish timely help which leads to enhanced student results. The project serves both the educational data mining research field and enables schools to deliver early help and customized educational assistance.

PROJECT OBJECTIVE(S)

1. The goal is to determine the success rate of machine learning models when they analyze behavioral data and study habit patterns to forecast academic performance metrics.

2. The study will determine the exact variables such as sleep patterns and study time and classroom participation that produce the most pronounced effects on academic results.

DATA COLLECTION

We established a Google Forms survey for gathering needed research data. Several quantitative behavioral and study patterns were measured through an online Google Forms survey as part of outcome influence assessment in academic performance.

Target Respondents

The students who participated in this study come from different departments at our educational institution within the College of Information Technology and Computing (CITC). We need responses from at least one hundred students who belong to four different departments within our organization:

- Computer Science (CS)
- Data Science (DataSci)
- Technology Communication Management (TCM)
- Information Technology (IT)

Survey Design

The survey contains questions focused on:

- Sleep patterns (e.g., hours of sleep per night)
- Study habits (e.g., hours spent studying per week)
- Time management
- Class participation
- Use of educational resources
- Attendance
- Gadget usage

The survey questions use mathematical computations to produce usable information for machine learning system operations.

Data Handling

When users submit their responses through the form they get automatically stored in a Google Sheets data file. All machine learning models need pre-processed raw data before their application:

- Encoding categorical variables
- Handling missing values
- Normalizing numeric data if needed

The study included measures to anonymize all collected data while receiving informed consent from participants.

Screenshot of Raw Data
(Insert a screenshot of your Google Sheets raw response data here. This should show column headers and a few anonymized rows of participant responses.)

[The data is not yet complete]

DATA PREPROCESSING
(what preprocessing have you done to the data and include the screenshots here of the code and the preprocessed data)

[The data is not yet complete]

MODELING
(If you have update here, discuss the model(s) used and why choose this model(s), screenshots of your code)

[The data is not yet complete]

EVALUATION
(screenshots of the result and interpret the results)

[The data is not yet complete]