Project 3 Proposal

Team Members

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Project Goal

The goal of this project is
1. to develop a machine learning model that evaluates student success[1] as a function of other student metrics[2] using one or more longitudinal studies provided by the National Center for Education Statistics (NCES) and
2. to allow a user to input student parameters and predict their future success.

Data Sources

1. **UCI Machine Learning Repository, Student Performance Dataset [https://archive.ics.uci.edu/ml/datasets/Student+Performance]**. From this source, our group aims to develop a simple machine learning model using a small data set. We plan to apply this experience before tackling the larger dataset (see #2 below).
2. **Institute of Educational Sciences (IES), National Center for Education Statistics (NCES) Online Codebook [https://nces.ed.gov/OnlineCodebook]**. From this source, our group aims to develop a machine learning model using the results of one or more longitudinal studies that followed various students throughout their academic careers.

App Routes

1. **Home Route**. Provide background information on the project. Provide our data sources. Display statistics and figures about the dataset used. Describe the machine learning model we developed. Links to other routes will also be provided.
2. **Student Success Route**. Provide a form where the user can input student data. App will provide a prediction of the student's success.
3. **Plotly Route**. Display visualizations from our data sources.
4. **Data Route**. Provide access to the data we used as a JSON.

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[1] Student success is currently being used as a broad term, and we will gain further clarity on this as we dive deeper into our data sources; however, it is envisioned that this may be something like predicted GPA, probability of graduating high school/college, class ranking, etc.
[2] Other student metrics may include hours spent studying/reading/watching TV per day, etc.