Project outline: Predictor of academic success

**1. Type of problem and ML:**

Objective: Predict whether a student will pass or fail.

Type of ML chosen: Supervised learning

Justification: the target is a clear variable (pass/fail) to predict

**2. Main features:**

Feature 1: The average grade

Why: we can have an easy visualization of the student's level and also the grade gap to reach the average if the grade is below average.

Feature 2: Previous years' grade by course

Why: We can get a clear picture of the student's strong and weak subjects.

Feature 3: The number of exams failed in recent years

Why: We can predict which exam the student will fail.

**3. Type of model:**

Family of models chosen: Regression

Why: We can run a regression on the marks for the last few years. With the trends for each subject, we can ask the model to predict the future grade. We can also calculate the predicted average and check whether the student will pass or fail the exam.

**4. Assessment strategy:**

The most critical error: Error A

Justification: Error A is the most serious, the student will fail and the platform won’t do anything to help them pass. The main objective of the platform is to help students succeed, it is clear that the fact that the student fails is not acceptable.