

BrightPath Grade Predictor

[Document subtitle]



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# Problem Statement

BrightPath Academy faces challenges in identifying at-risk students early, understanding how extracurricular activities influence grades, and developing targeted support strategies. This project addresses these issues by building a predictive model for GradeClass and analyzing key factors affecting student outcomes.

# Hypotheses

We hypothesize that:

* Students with higher StudyTimeWeekly are more likely to achieve better grades.
* Higher Absences correlate with lower grades.
* Participation in Extracurricular activities positively impacts grades.
* ParentalSupport levels significantly influence student performance.

These hypotheses will be explored and tested in the notebooks/eda.ipynb notebook through data visualizations and statistical analysis.

# Preparing Data

# Exploratory Data Analysis (EDA)

## Univariate Analysis

## Perform Bivariate Analysis

# Preprocessing Data

# Evaluation Metrics

# Model Building: Part 1 (Baseline Models)

# Model Building: Part 2 (Deep Learning)