PROJECT
PerFormaPREd

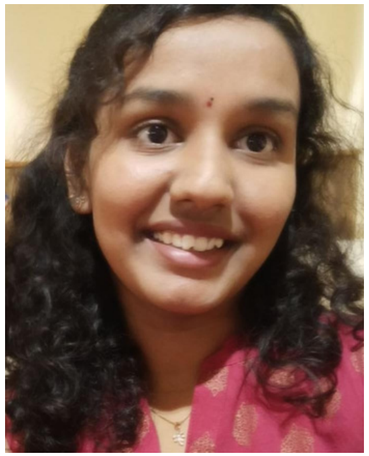
A Student Academic Predictor




Overview

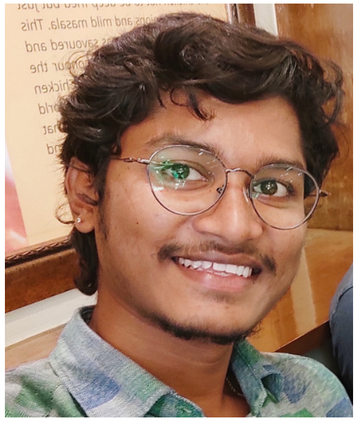
- Introduction
- Business Understanding
- Objectives
- Data Preparation
- Data Understanding
- CRISP-DM
- Conclusions

The Performers



Sri Harshetha

DATA ANALYST



Koteswar

DATA ENGINNER

Narasimha

DEVELOPER

Ganesh

DATA SCIENTIST

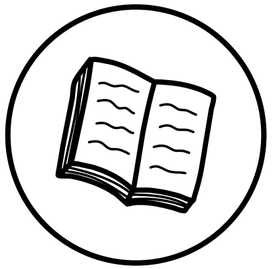
Business Understanding

- As student engineers, we are on a mission to transform education by leveraging cutting-edge technology such as machine learning to empower other students facing challenges.

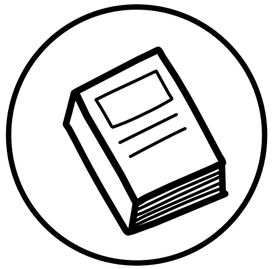
- Our project predicts academic performance by identifying key factors for success, allowing us to provide targeted assistance and pave the way for brighter futures.

Data Preparation

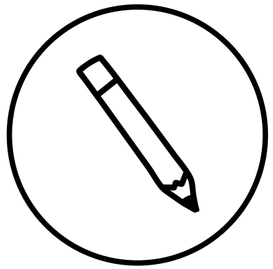
Source : Paulo Cortez, University of Minho, GuimarÃ£es, Portugal, http://www3.dsi.uminho.pt/pcortez



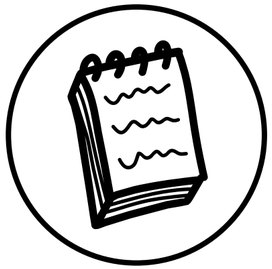
This dataset approach students achievement in secondary education of two Portuguese schools.



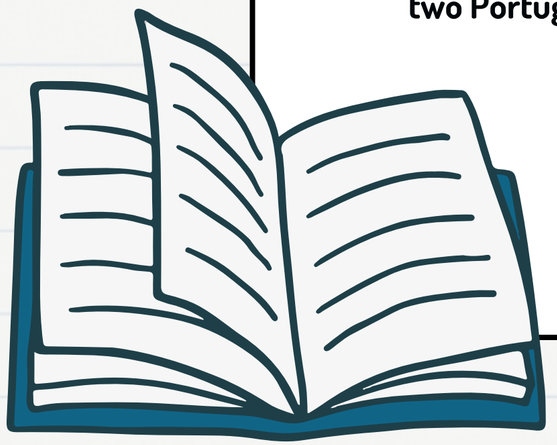
The shape of our data set is (395 rows × 31 columns).



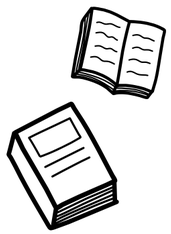
No missing values in the data, so we do not have to process lines with missing values.



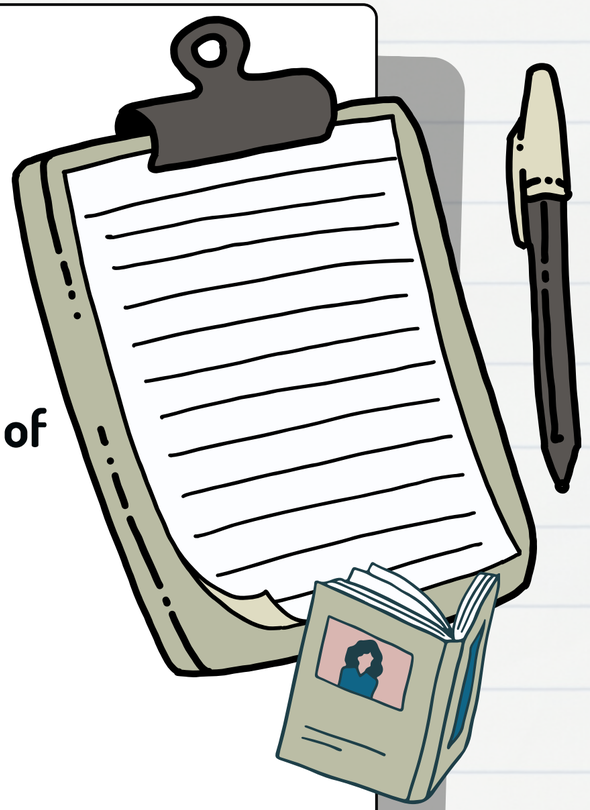
The last column tells us whether or not the student passed the final exam.



Data Understanding



- This dataset consists of information about academics of students
- Attributes such as Student's preference of higher education ,Mother's higher education,Father's higher education,Student's study hours etc
- Student's overall growth attribute is target feature



OBJECTIVES

Predict

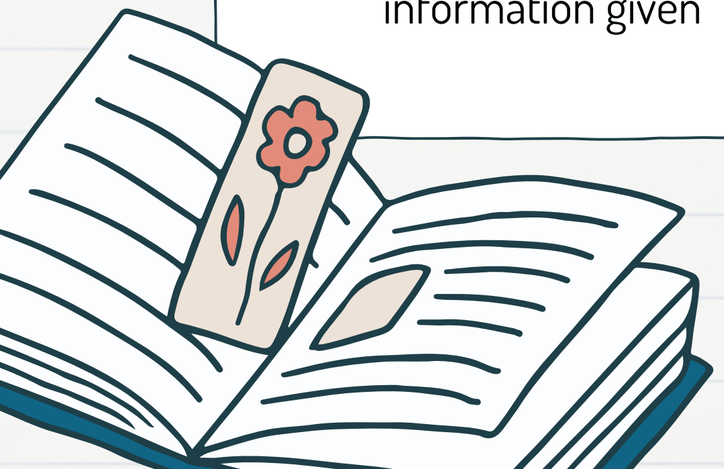
Predict whether or not a student will pass the final exam based on certain information given

EFFECTIVE ATTRIBUTES

Find out what most affects student achievement

OPTIMAL MODEL

Compare the two machine learning algorithms.Find the best algorithm with high accuracy



CRISP-DM

Business Understanding

Data Understanding

Data Preparation

MODELLING

Evaluation

Deployment

Conclusions

01

By leveraging machine learning tools, we aimed to predict student performance and provide targeted interventions for those facing educational challenges, particularly in marginalized communities.

02

Our project showcased the efficacy of SVM as the preferred classification algorithm, achieving an 84% accuracy rate, highlighting the potential of technology to revolutionize educational support systems.

03

Through meticulous data processing, visualization, and algorithm comparison, we identified impactful factors for student academic success, paving the way for personalized interventions and improved educational outcomes

Thanks For Watching