



# GradeMate

## Business Context

- ExcelEdge Institute, recognises the importance of **data-driven insights** in **enhancing students grade**.
- They have partnered with us to develop a predictive model that empowers educators to make informed decisions about student support and intervention strategies.

This project aims to **develop data-driven model to predict student academic performance**, based on study habits, specifically study hours.

## Data Source

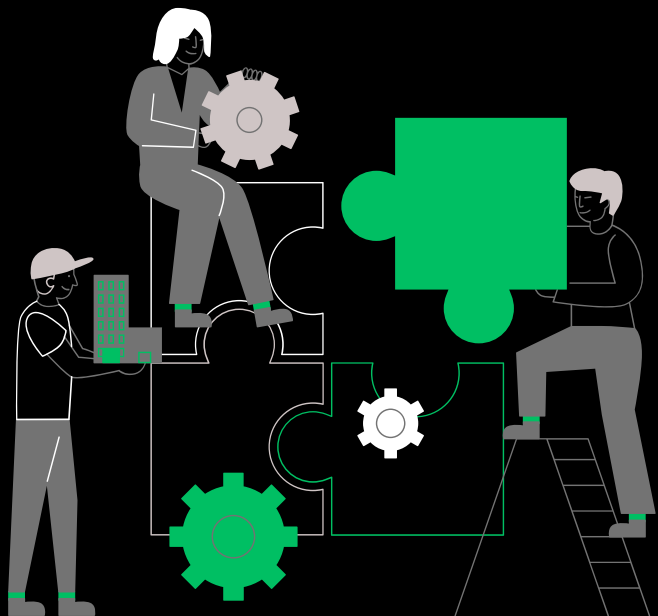
- Dataset used for this project [available on Github].
- Link to the notebook [available on Github].





## Key Metrics

1. Correlation between study hours & student scores: **0.98** (Positive correlation).
2. Model accuracy (R-squared): **0.93**.
3. Root Mean Squared Error (RMSE): **6.35**.



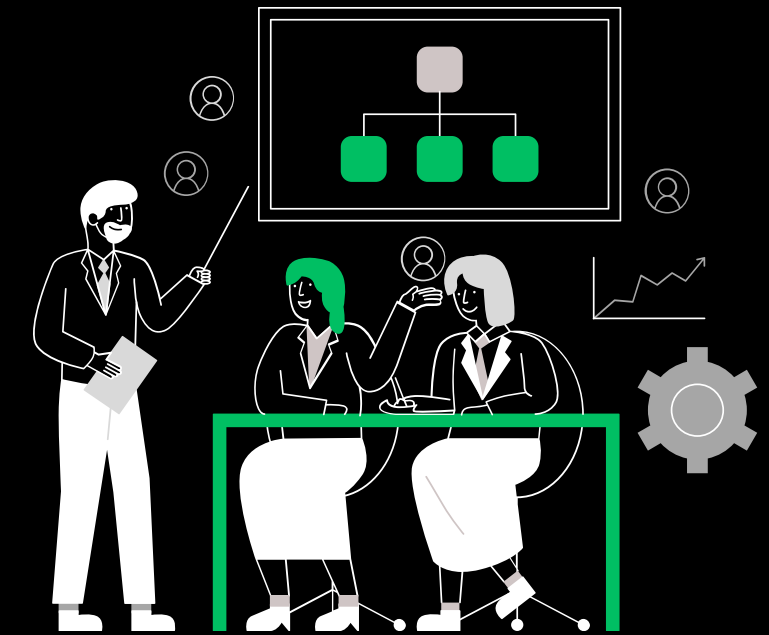
## Business Implications

- a. Early identification of at-risk students:**  
through predictive analytics.
- b. Personalized learning strategies:**  
Tailored support for individual needs.
- c. Resource Optimization:**  
Allocation of resources where most needed.
- d. Competitive advantage:**  
Data-driven insights for student success.



# Conclusion

- **“GradeMate” accurately predicts student performance** based on study habits.
- **Provides valuable insights** for educators and students to improve academic outcomes.
- **Empowers ExcelEdge Institute to make data-driven decisions** and enhance student support.



# Project Findings

**Dedicated effort leads to better academic outcomes** as evidenced by the strong correlation between study hours and student scores.

## GradeMate can:

- **leverages this relationship** to predict performance, offering personalised insights.
- **by understanding the impact of study habits**, personalised learning strategies can be developed for improved success.
- **GradeMate empowers ExcelEdge Institute** with data-driven decision-making for student support and intervention strategies.

