

Explore AI Interns



# IDENTIFYING AT-RISK STUDENTS

Team 15

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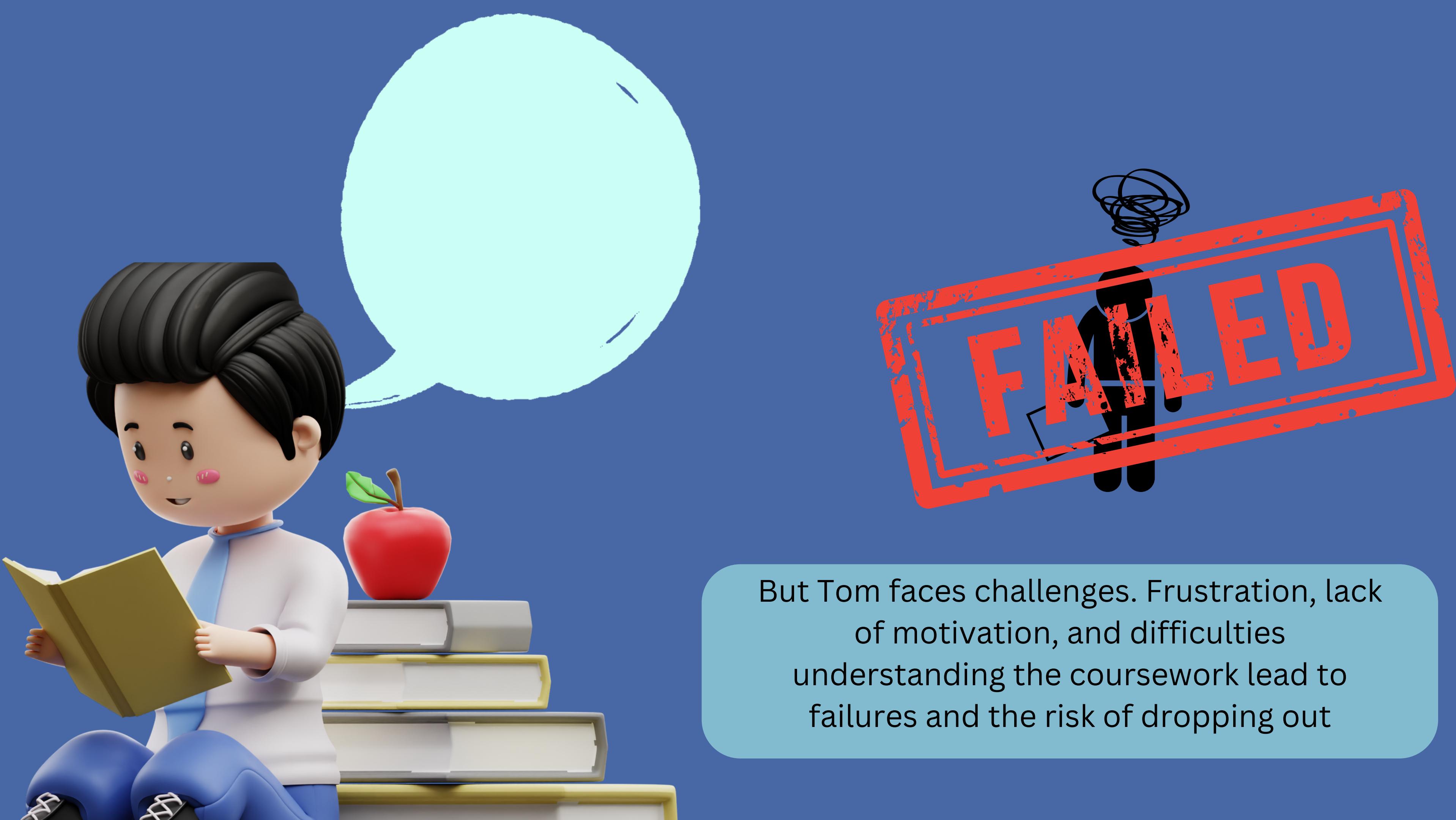
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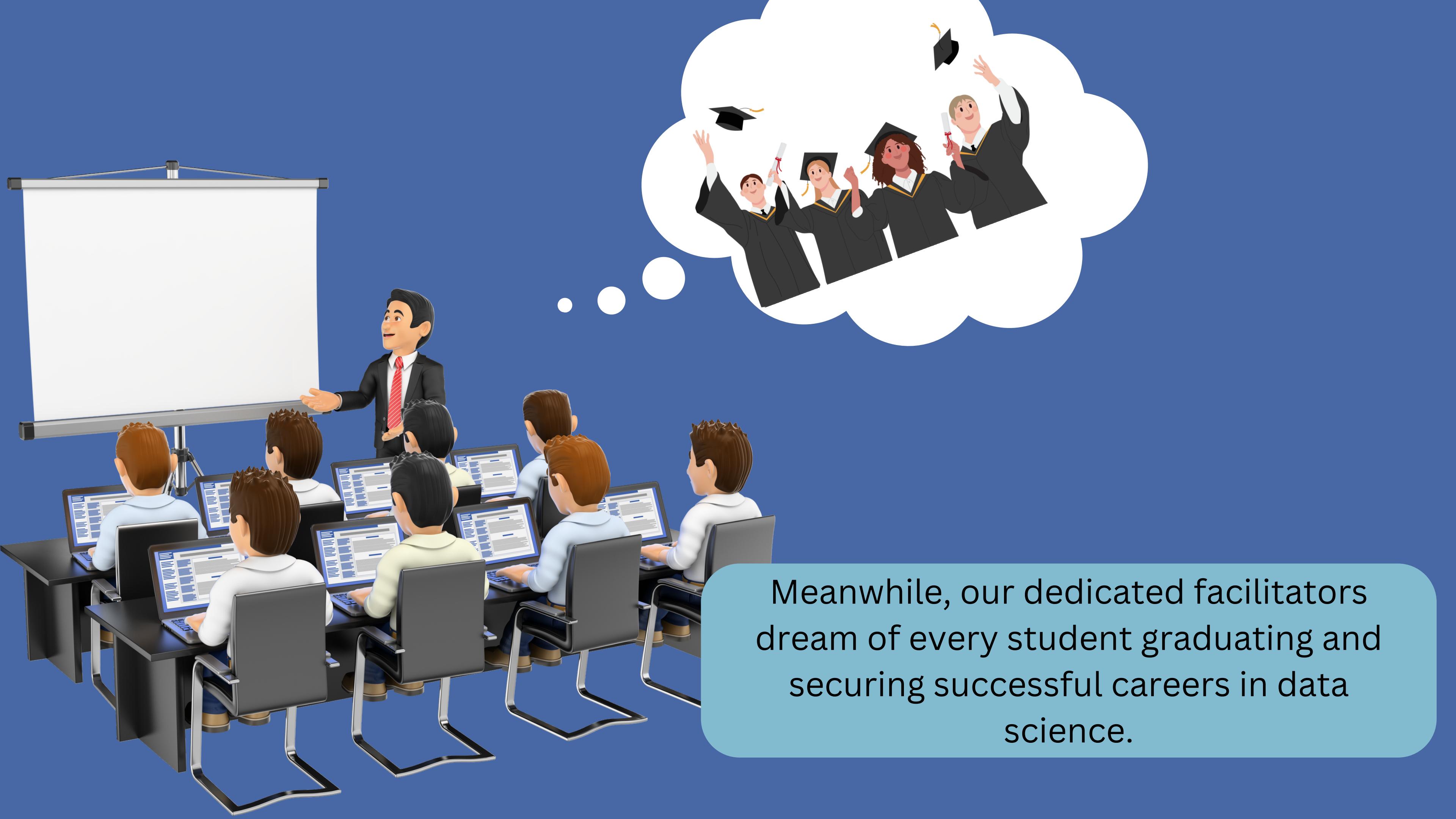
# INTRODUCTION



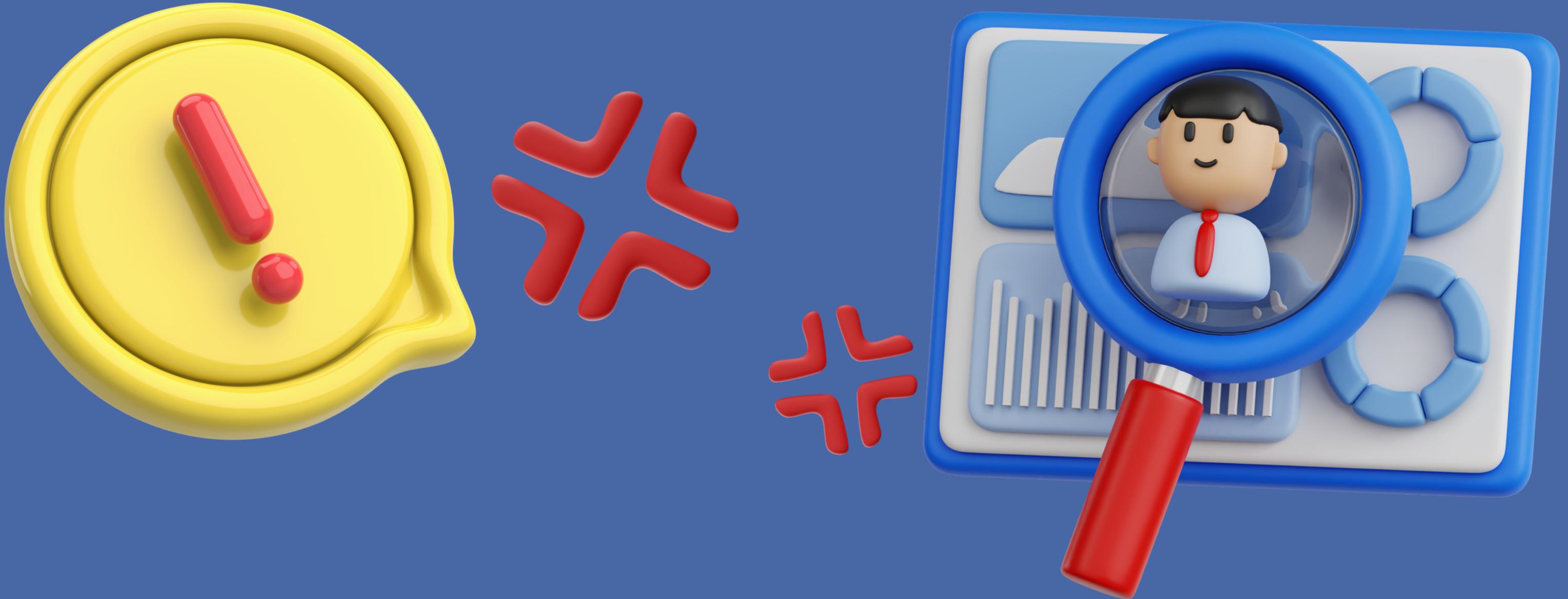
Meet Tom, a passionate student at Explore Academy with dreams of becoming a data scientist.



But Tom faces challenges. Frustration, lack of motivation, and difficulties understanding the coursework lead to failures and the risk of dropping out



Meanwhile, our dedicated facilitators dream of every student graduating and securing successful careers in data science.



Yet, identifying students like Tom who are at risk is a complicated process. How can we intervene effectively and support these students on their journey?

# OVERVIEW

## 1. Mission Unveiled:

- Transform student tracking at Explore AI Academy.

## 2. Dashboard Vision:

- Streamline admin tasks, enhance student support, and generate actionable insights.

## 3. Educational Innovation:

- Unlock every student's potential.





# DATA OVERVIEW

05



# DATA INFORMATION

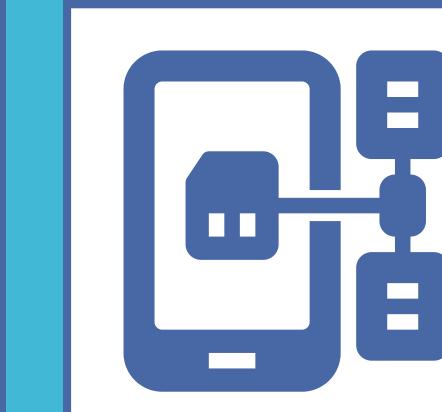
-  predict data
-  sprints data
-  programmes fdata
-  belt points data
-  students data
-  logins data
-  test data

# DATA TRANSFORMATION



## Cleaning Data

- Handling Missing Value
- Dealing with Outliers



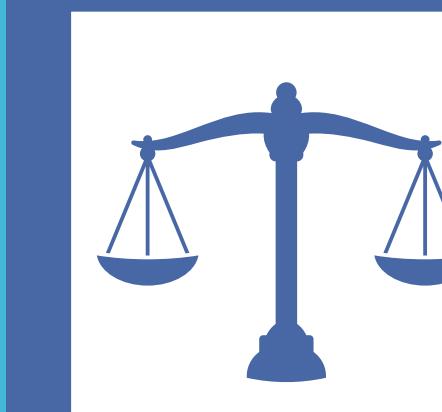
## Structuring Data

- Changing Data Types
- Reshaping Data



## Enriching Data

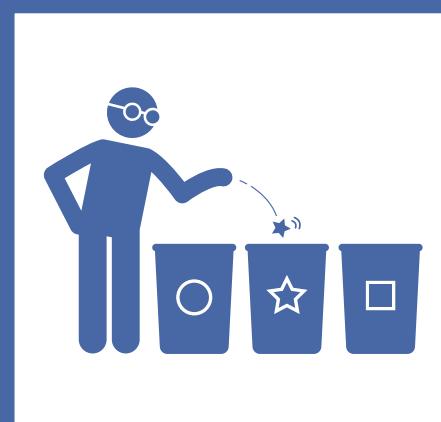
- Adding Derived Features
- Joining Data



## Scaling and Normalization

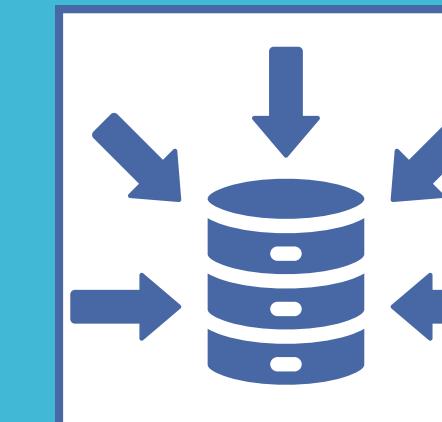
- Scaling Numerical Data
- Normalizing Data

# DATA TRANSFORMATION



## Handling Categorical Data

- Label Encoding



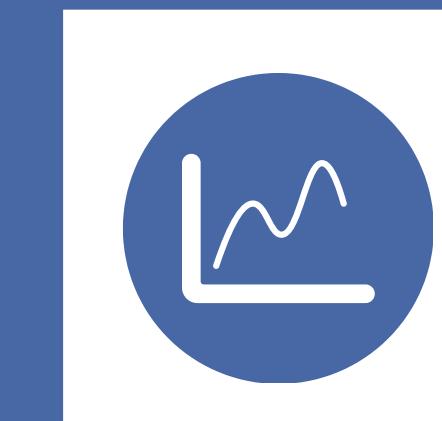
## Aggregating and Summarizing

- Resampling



## Handling Duplicates

- Removing Duplicates



## Handling Time Series Data

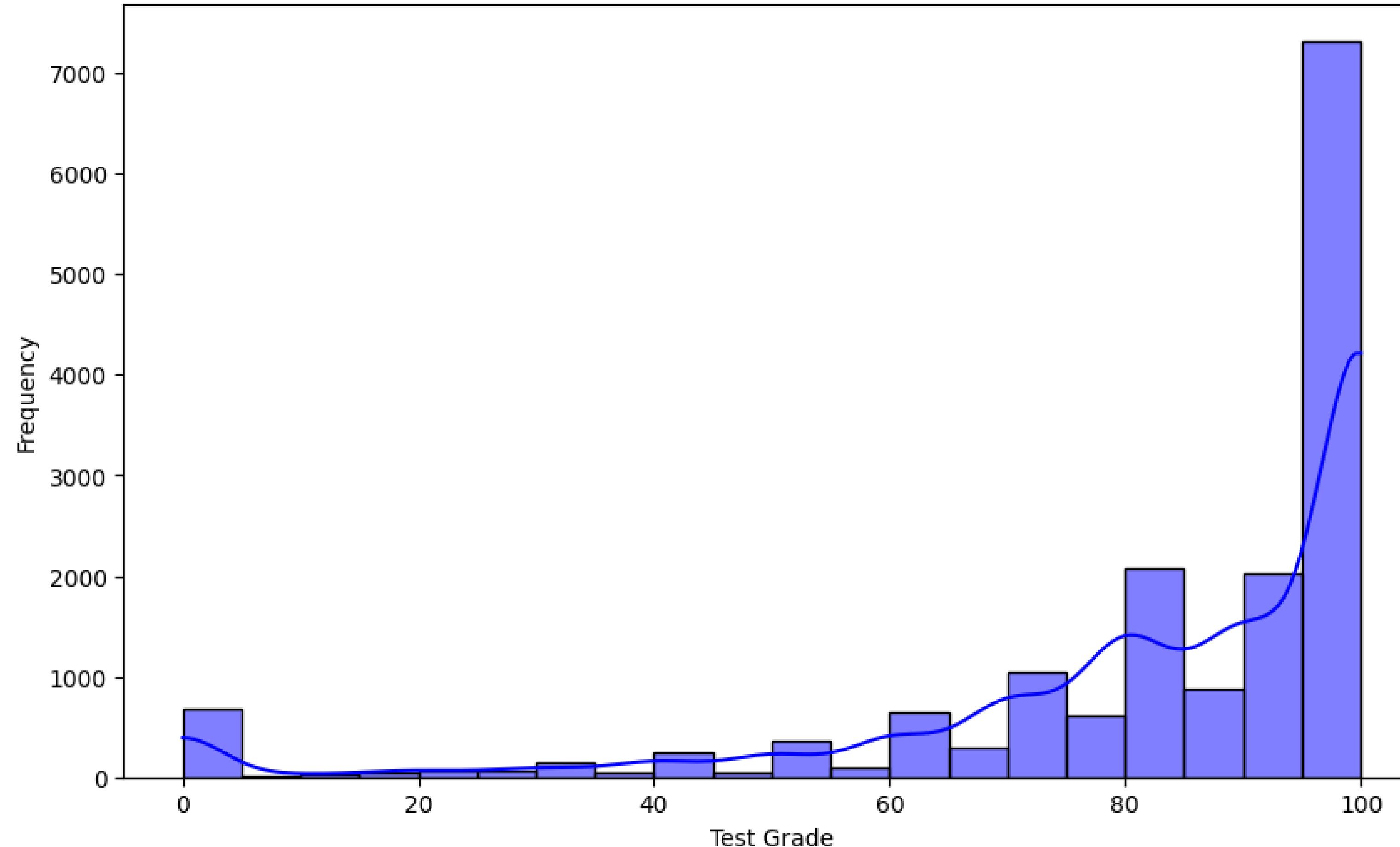
- Scaling Numerical Data
- Normalizing Data



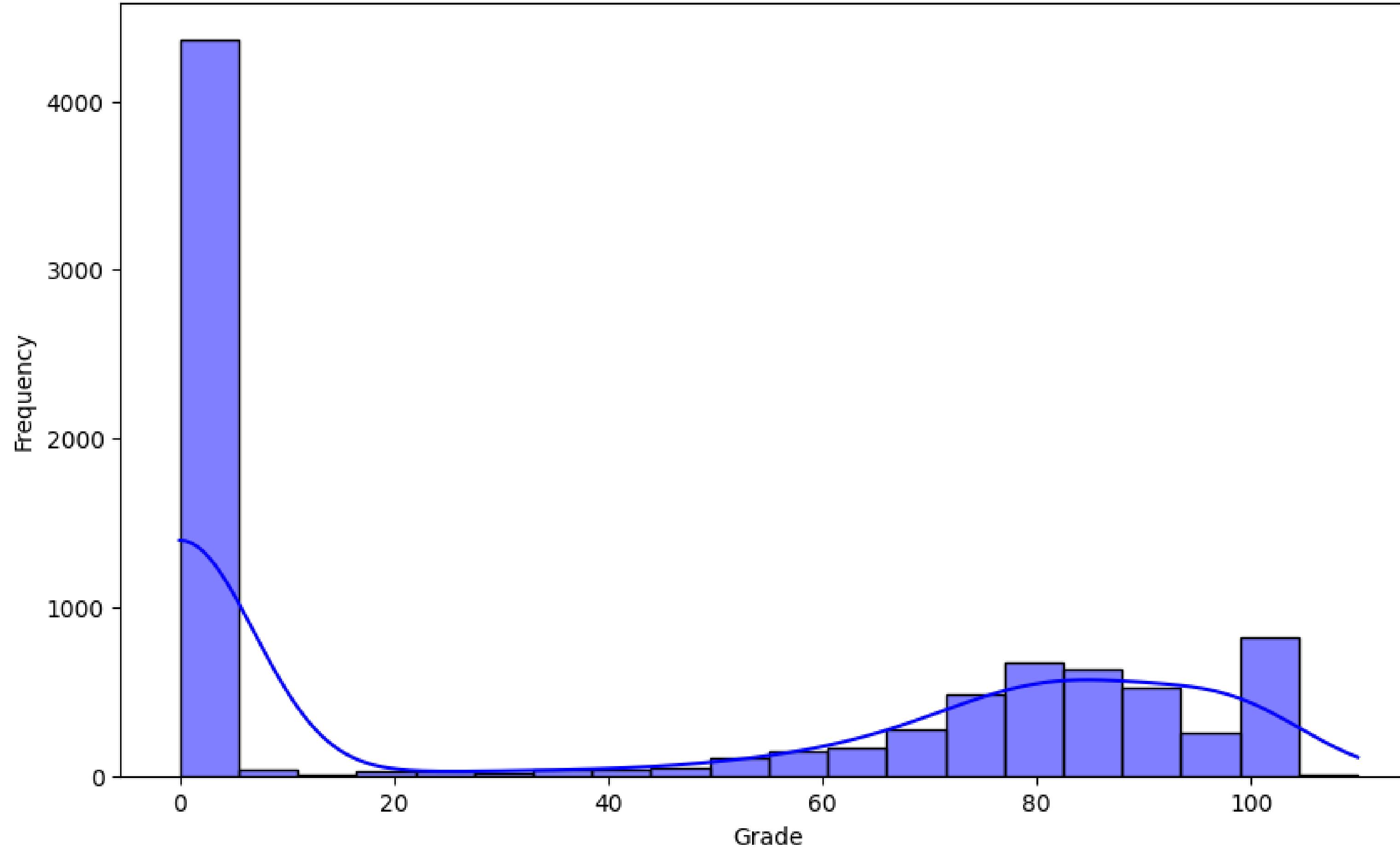
# EXPLORATORY DATA ANALYSIS

09

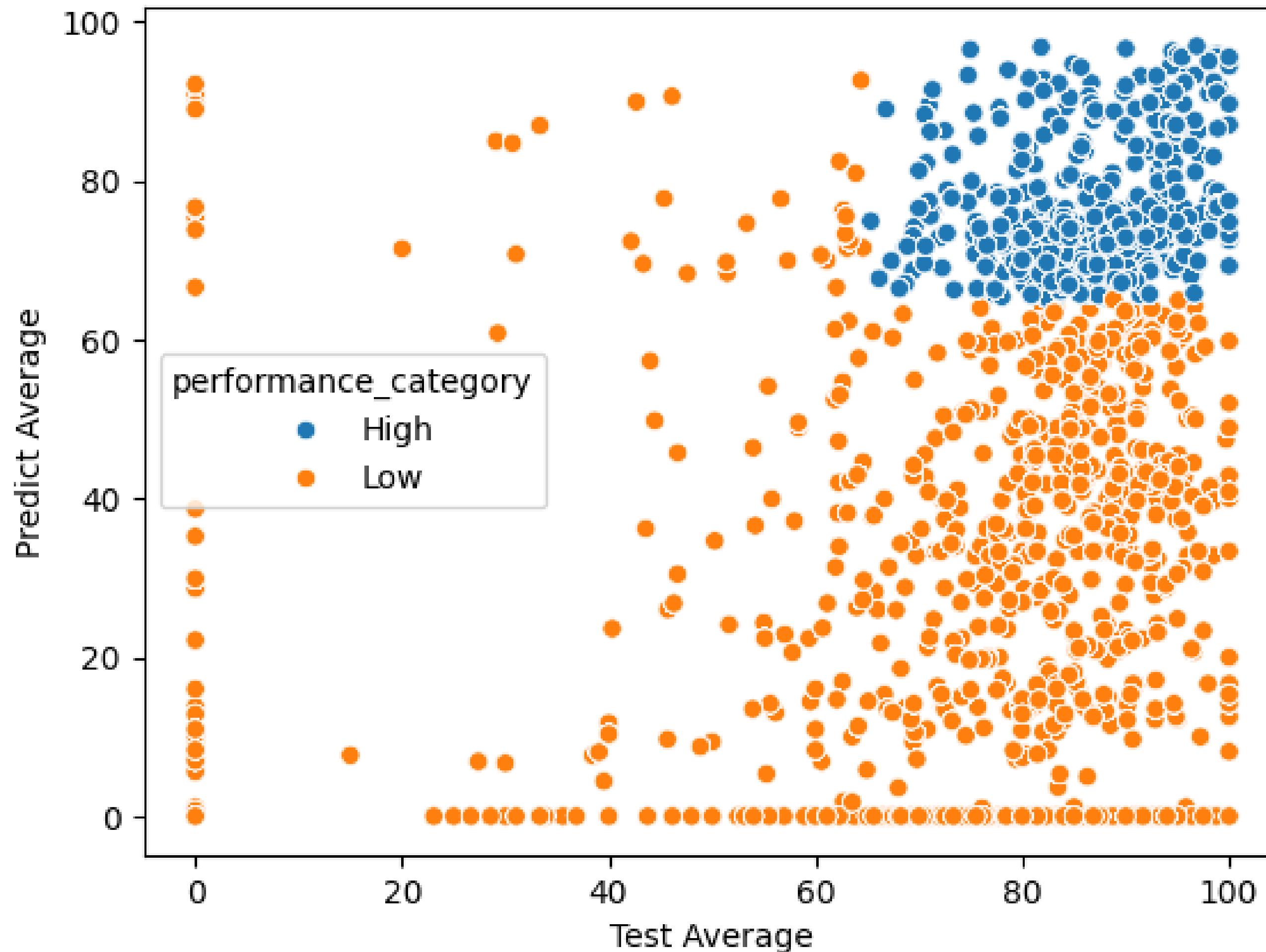
## Distribution of Test Grades



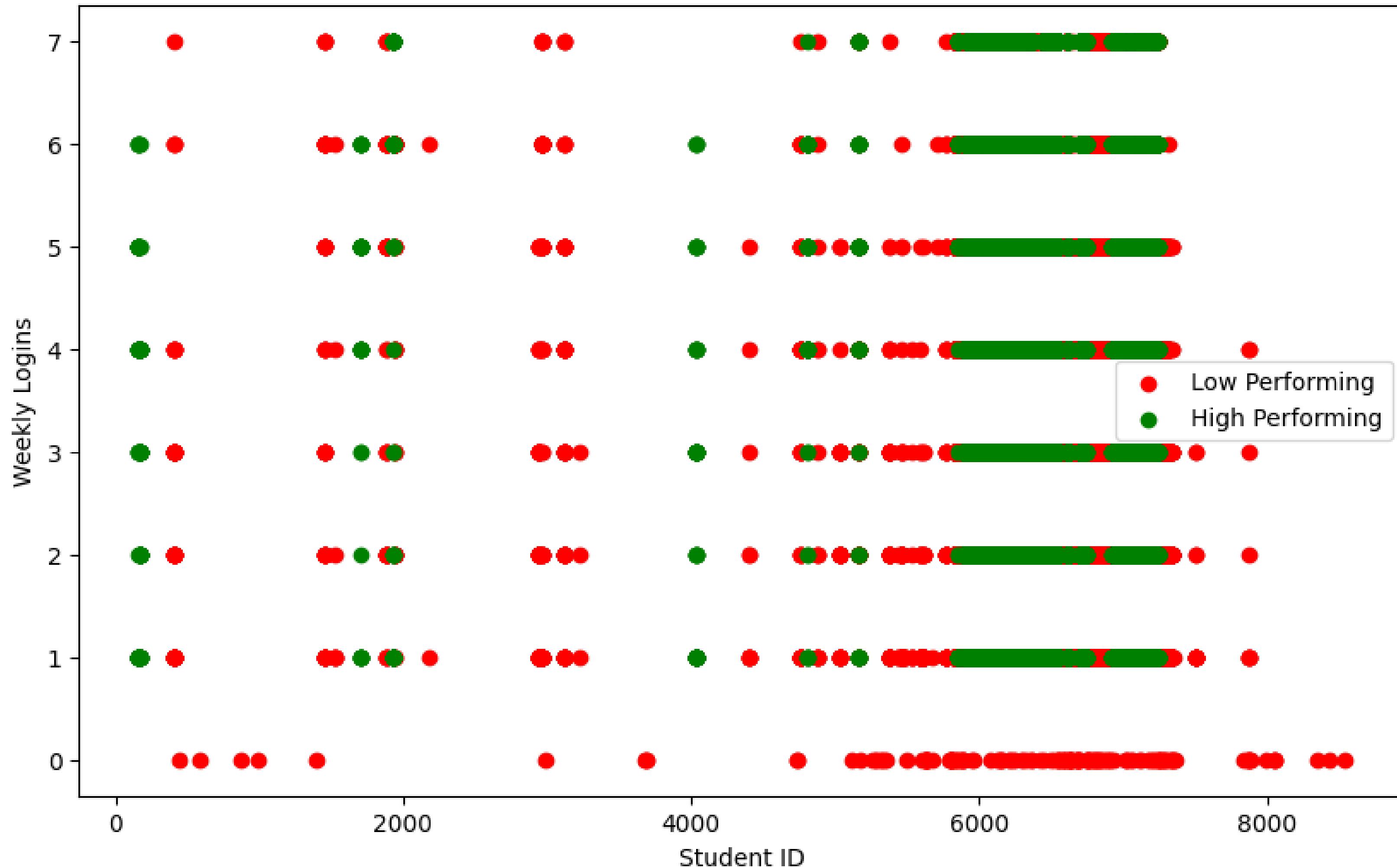
## Distribution of Grades



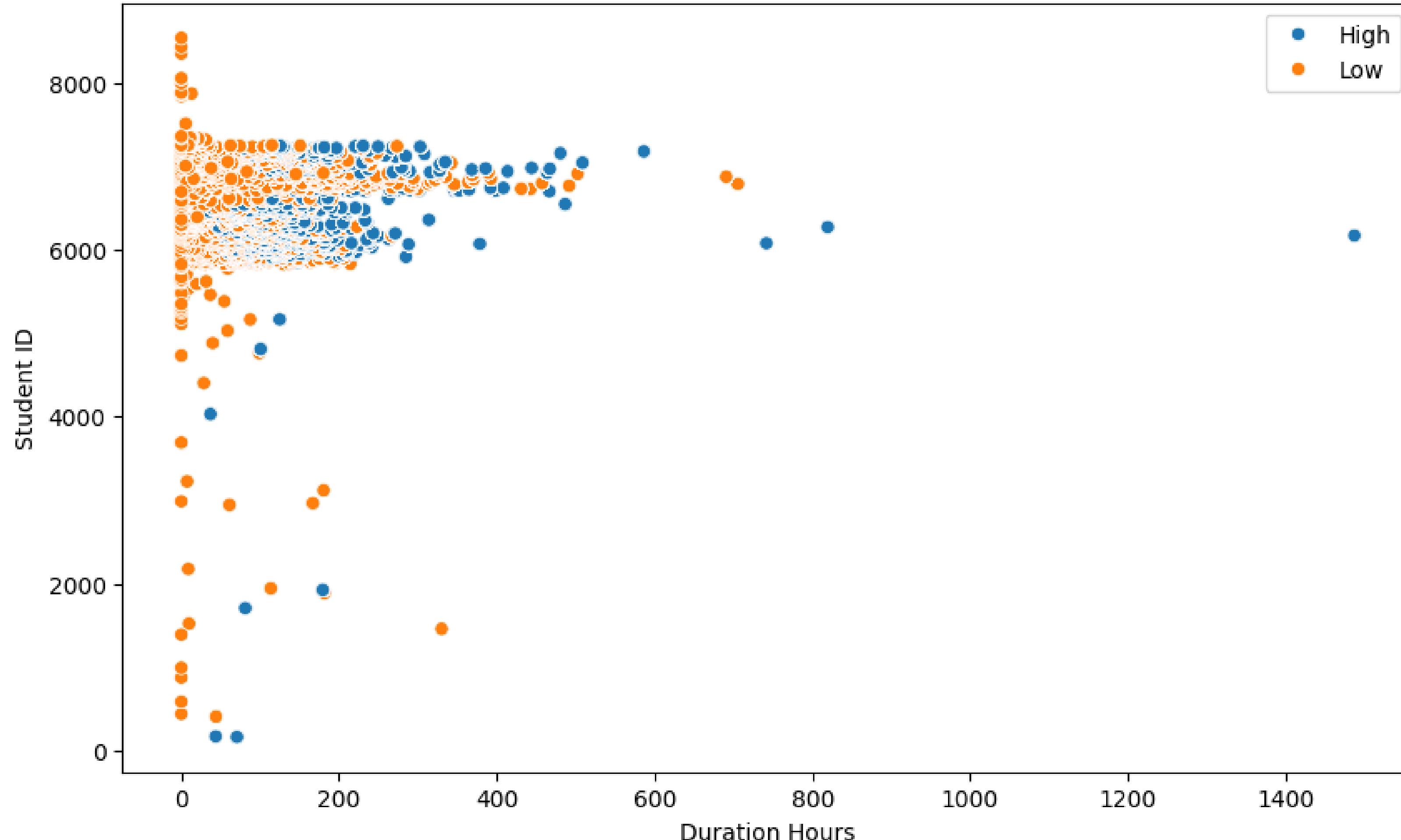
# Test vs Predict Average Comparison

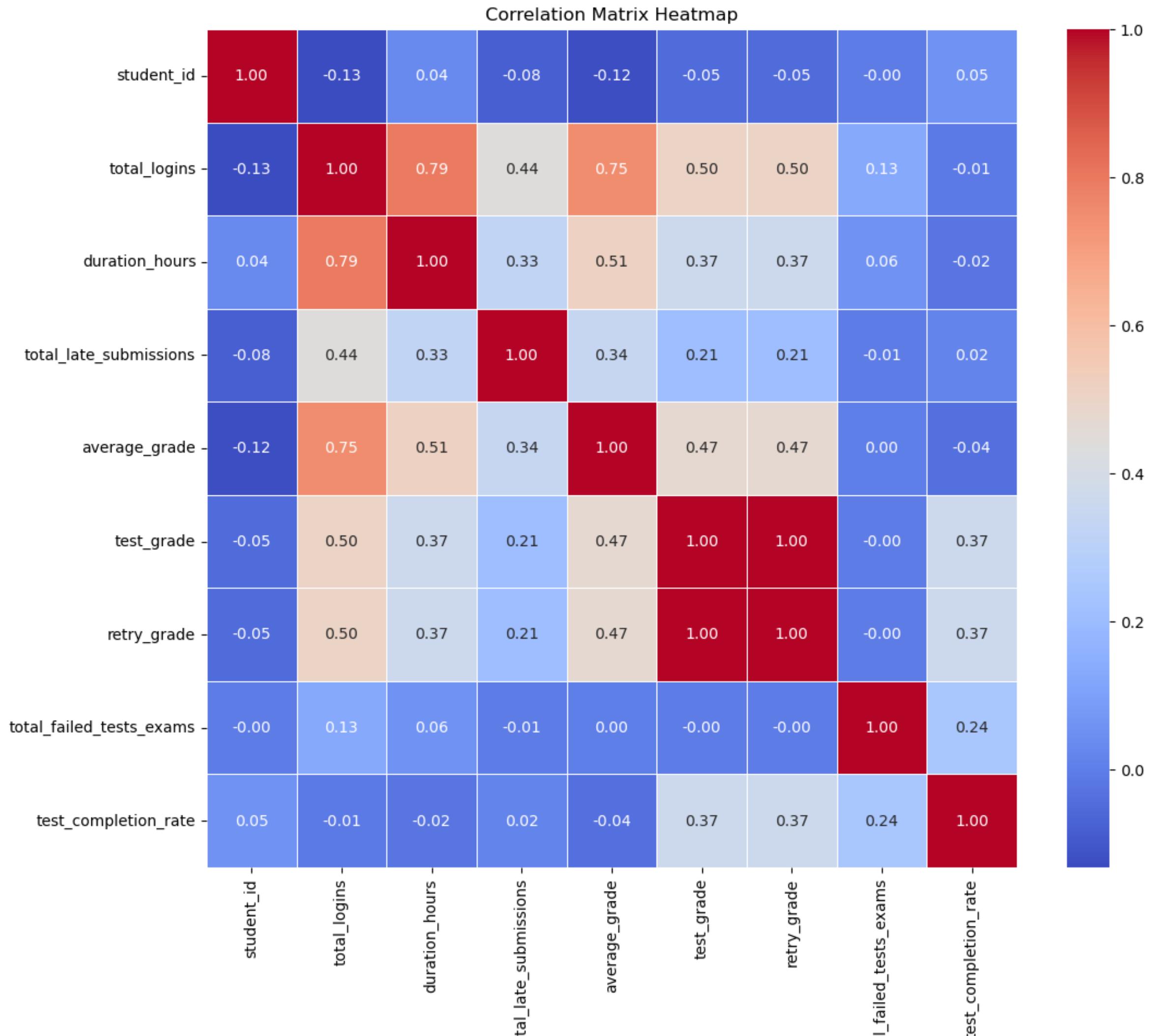


# Weekly Logins for Low and High Performing Students



# Comparison of Duration Hours for High and Low Performing Students







## AT-RISK CRITERIA

# AT-RISK



## Weekly Logins

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## Average grades

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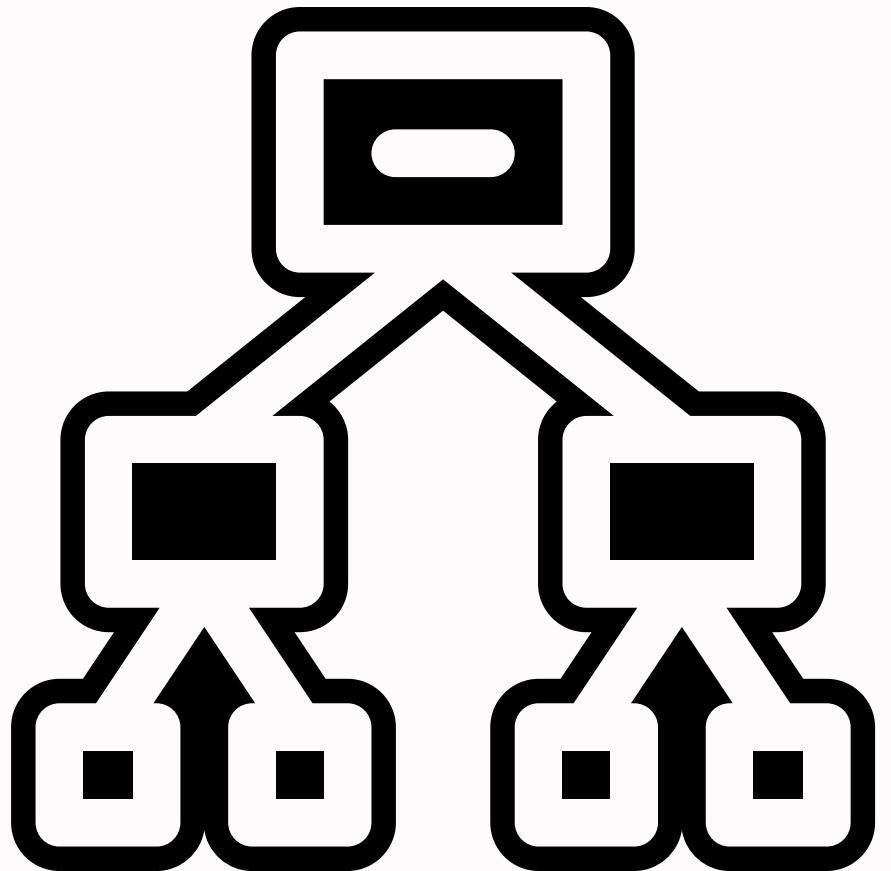


## Login duration

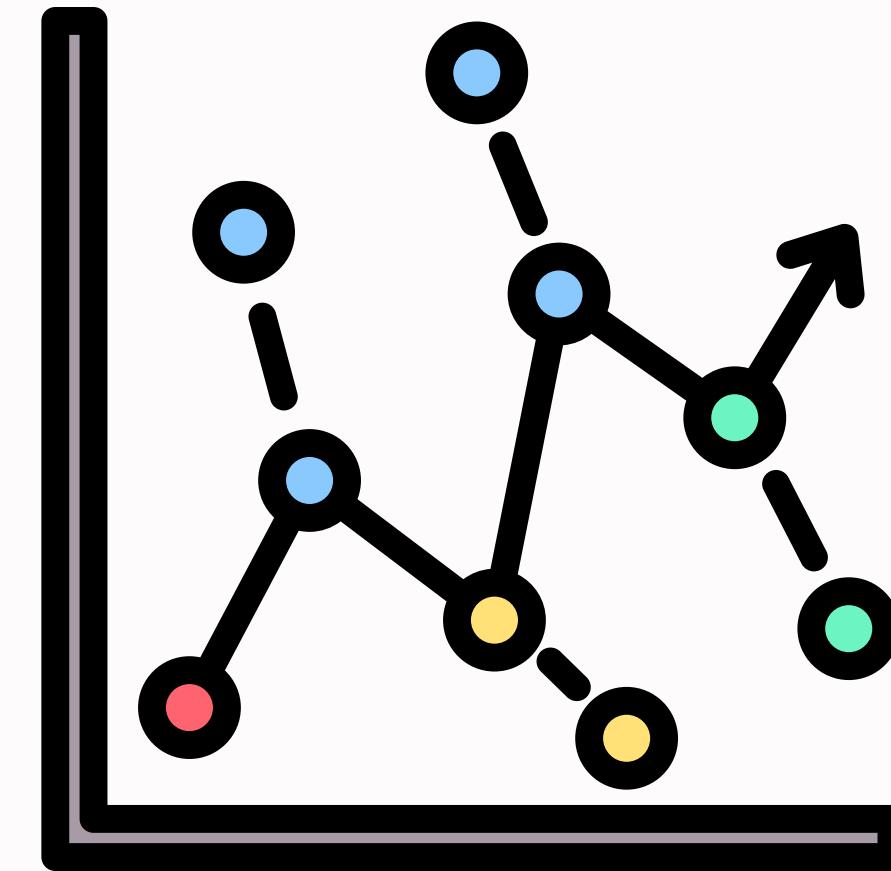
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis vulputate nulla at ante rhoncus, vel efficitur felis condimentum. Proin odio odio.



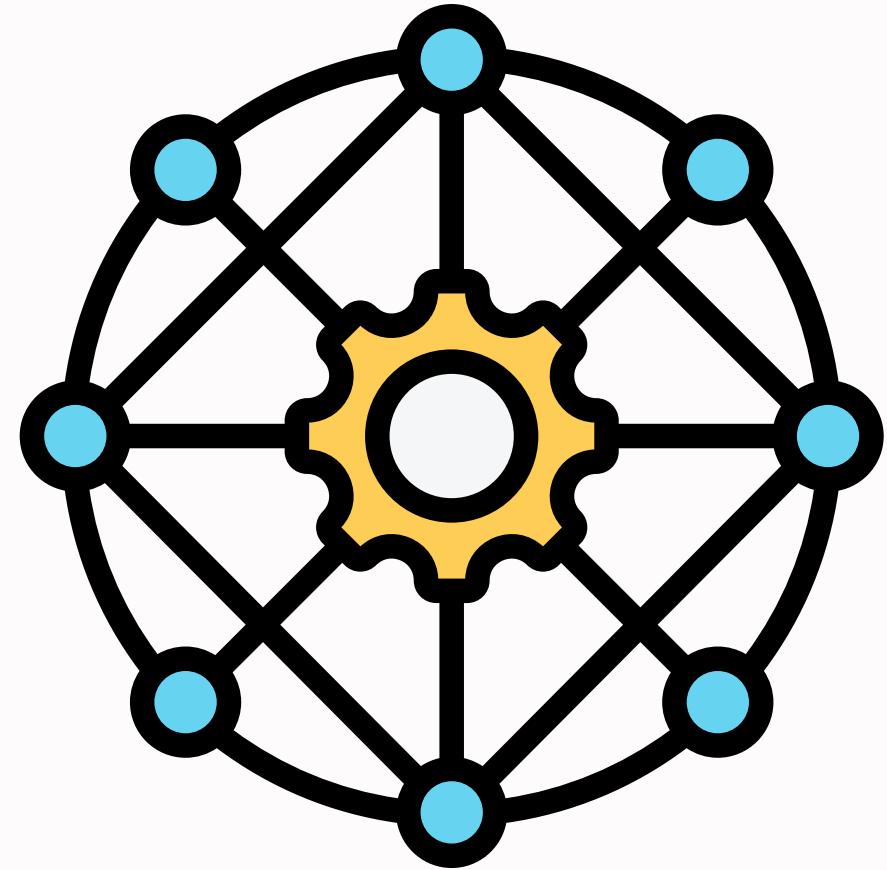
# MODEL SELECTION



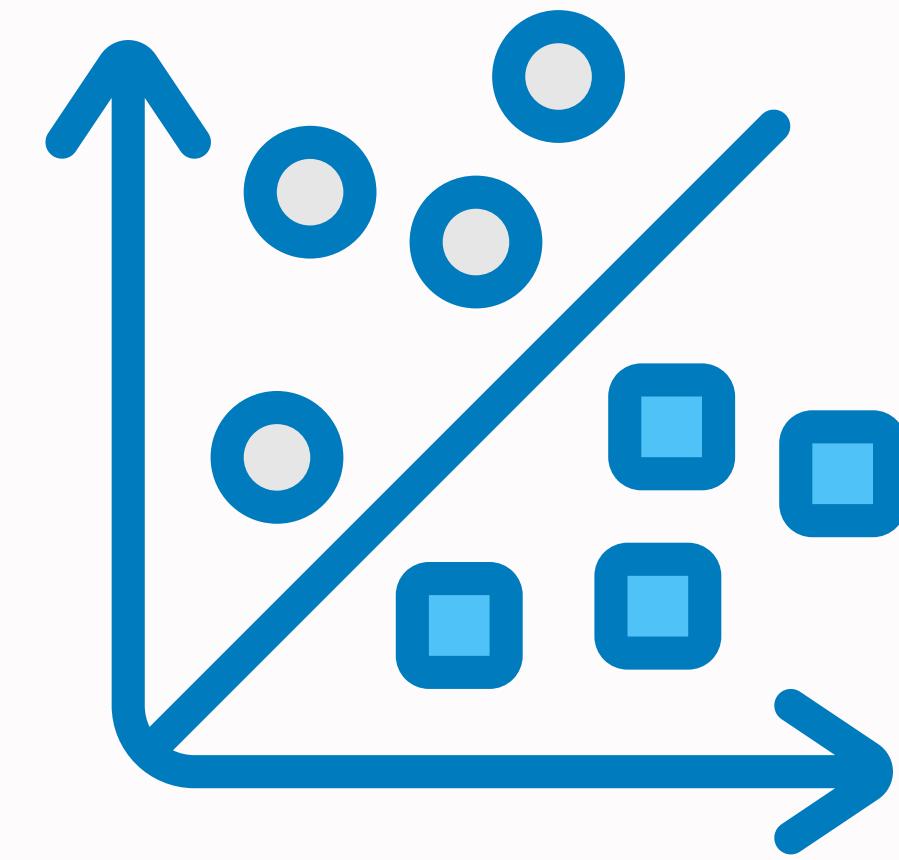
Decision Tree



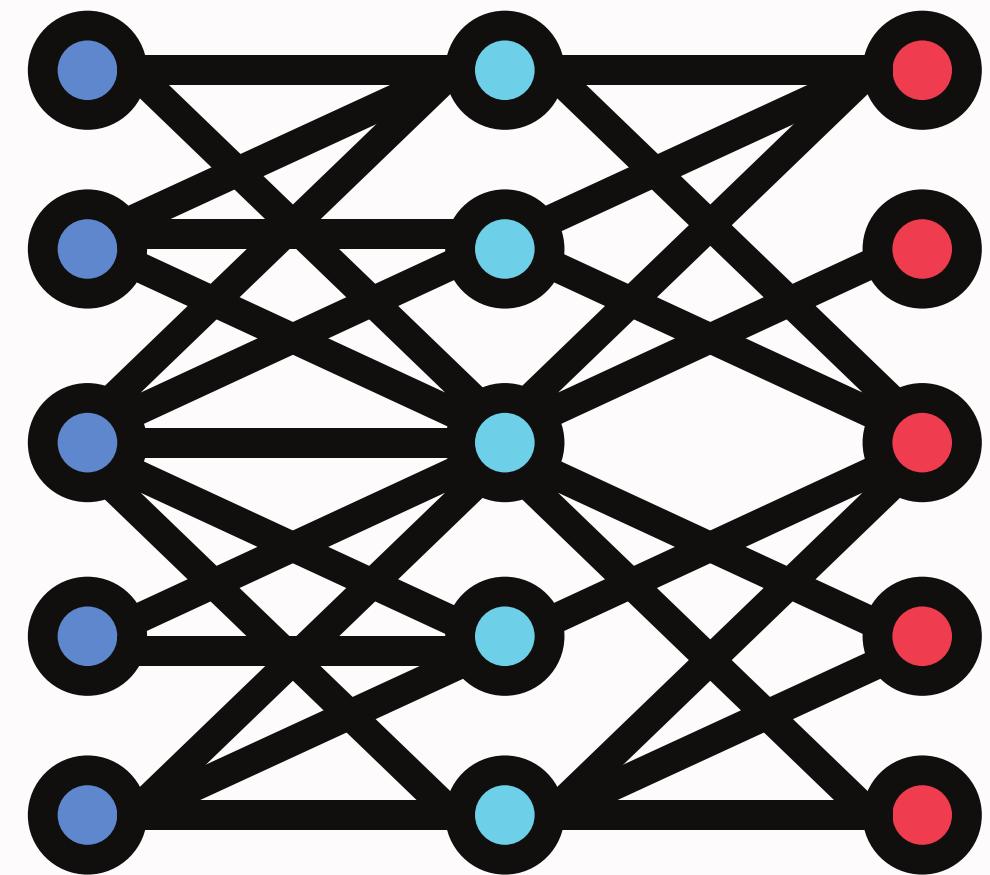
Logistic Regression



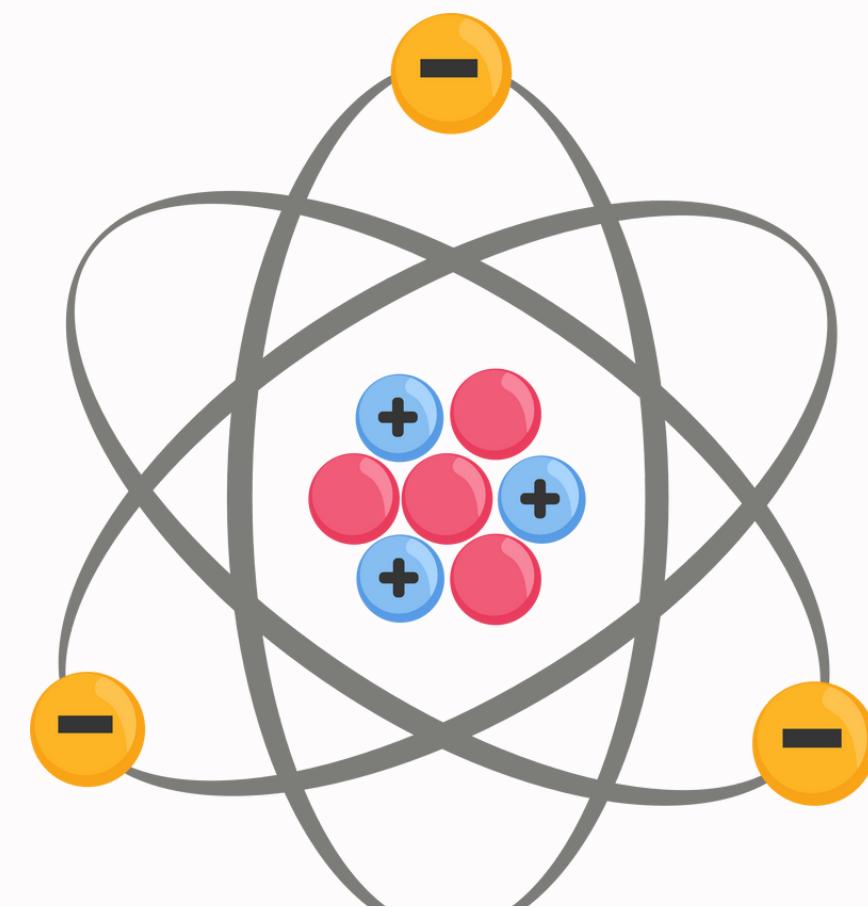
Random Forest



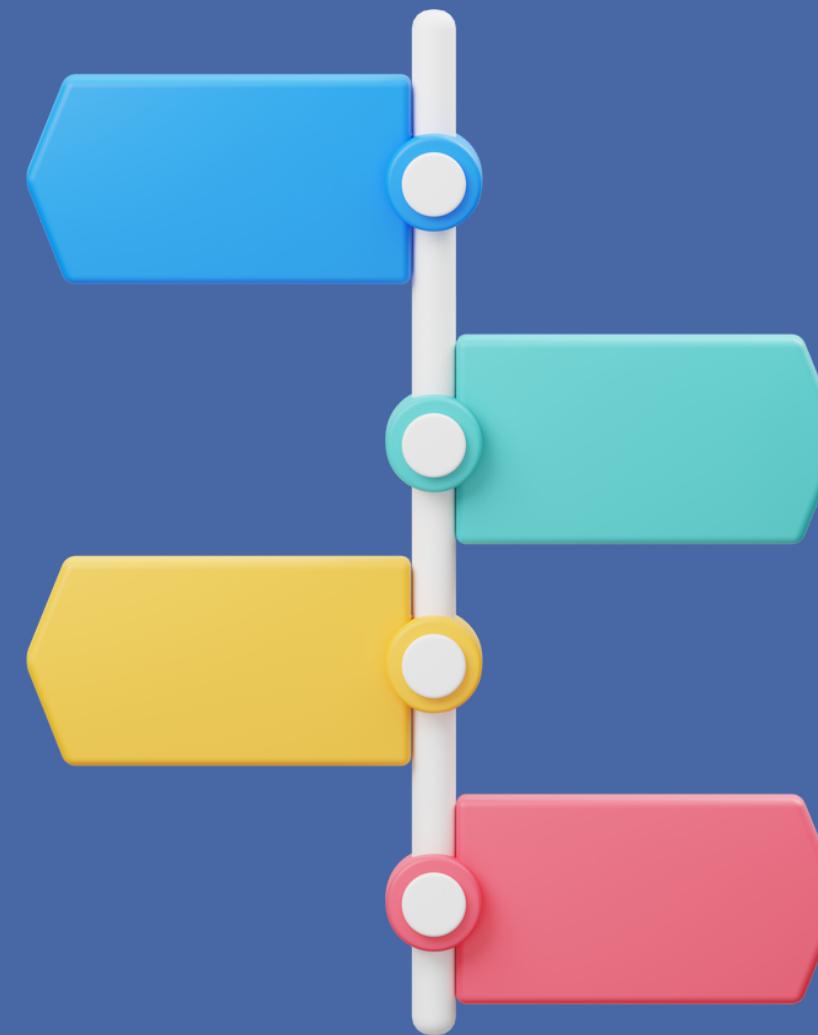
Support Vector Machine



Neural Network

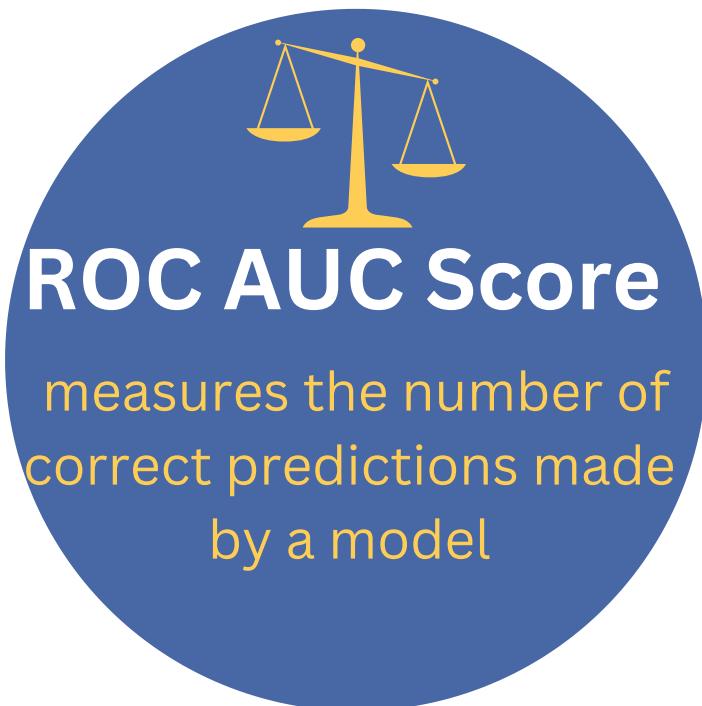
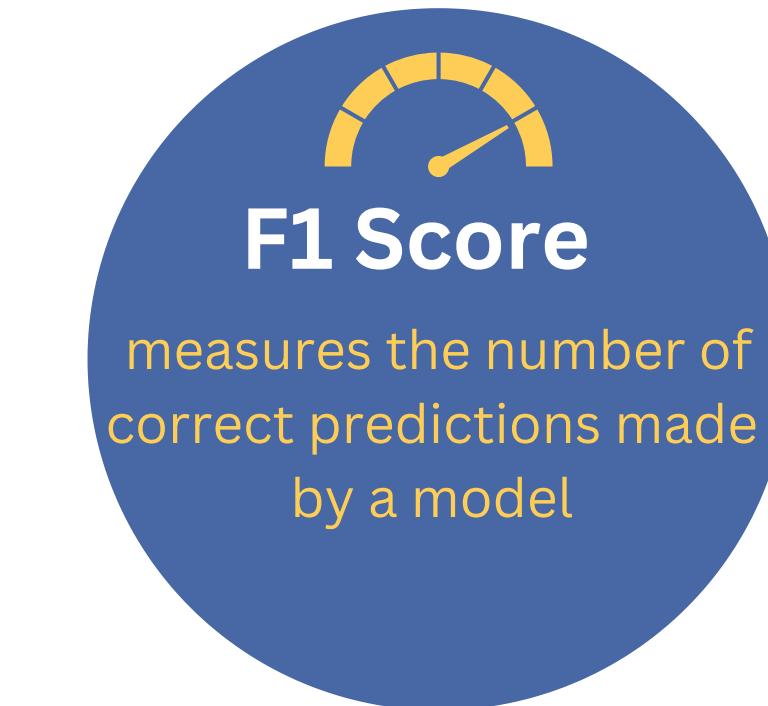
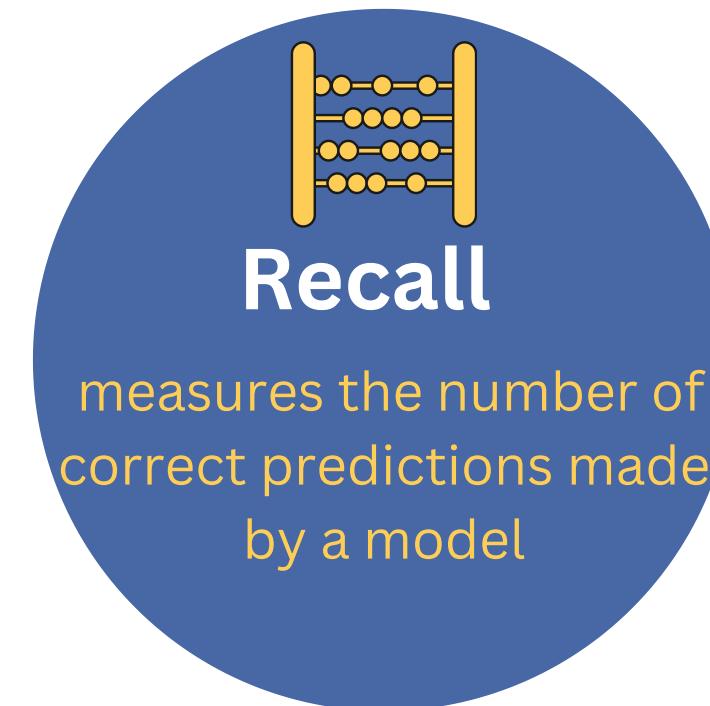
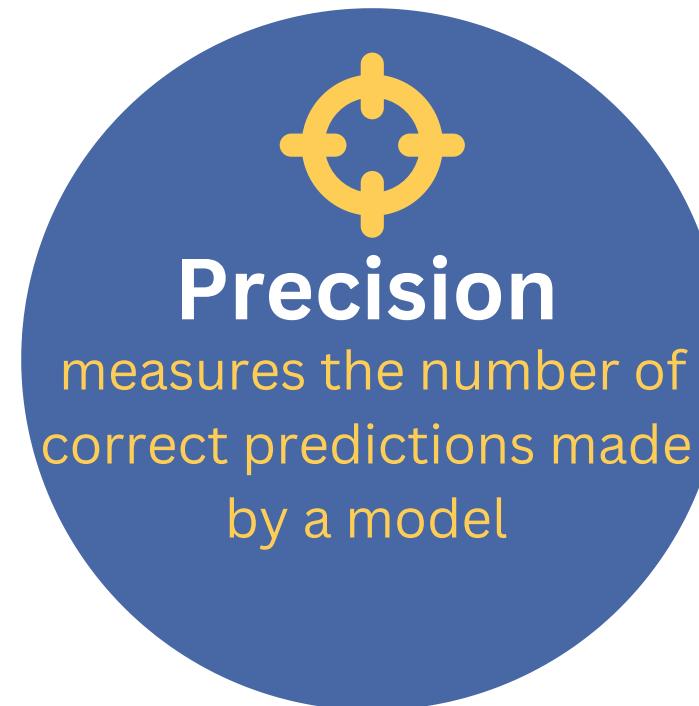
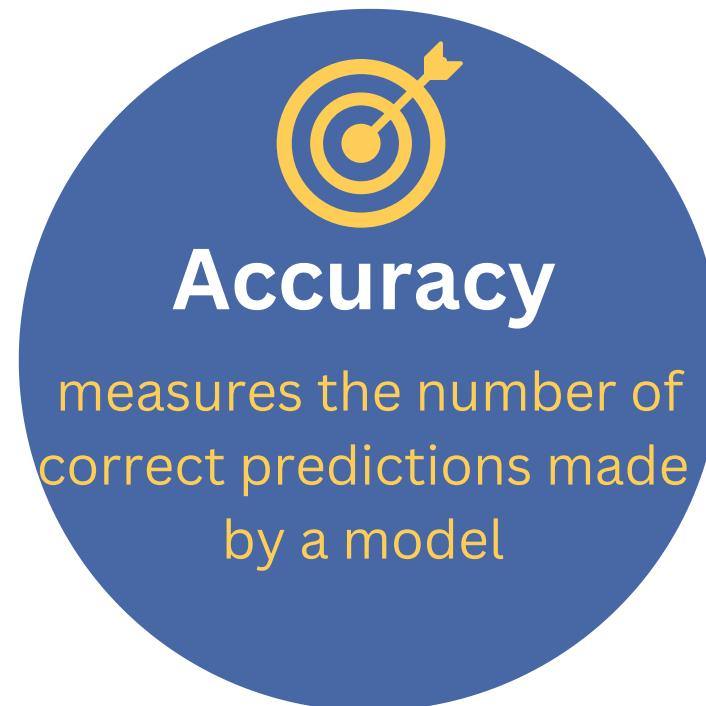


Ensamble



# MODEL EVALUATION

# EVALUATION





# MODEL PERFORMANCE

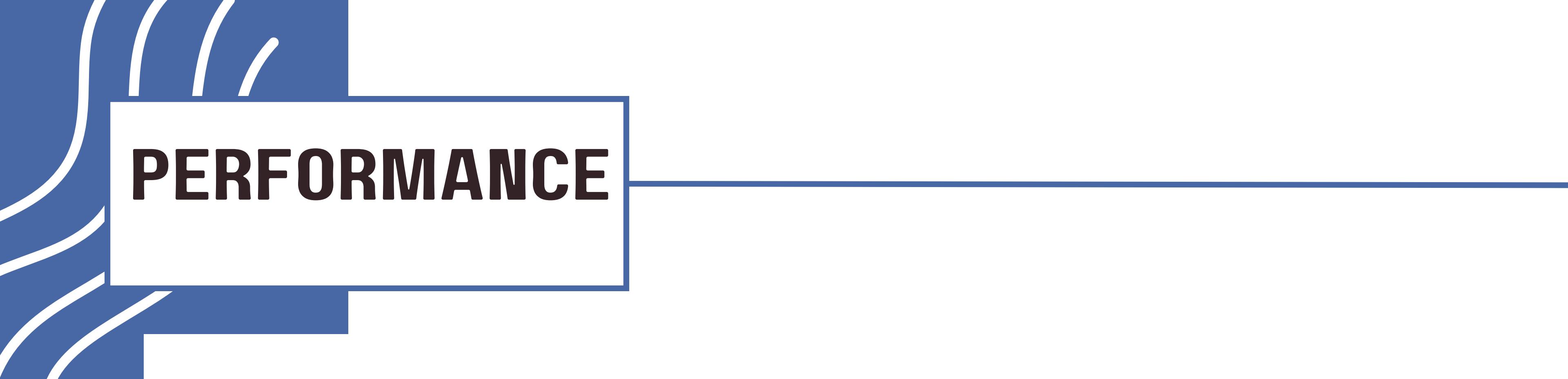


# PERFORMANCE

Decision Tree

Logistic Regression

Random Forest



# PERFORMANCE

Support Vector Machine

Neural Networks

Ensamble



# DASHBOARD DEMO

X

:

Choose your filter:

Select Student:

Choose an option

Select Sprint:

Choose an option

 **Student View**

 Cohort View

 At-Risk View

# Student Tracking Dashboard

## Test Metrics

Overall Test Grade Average

**13.38**

Submitted Test Grade Average

**82.83**

Test Attempted Percentage

**16%**

Total Missed Tests

**86801**

## Predict Metrics

Overall Predict Grade Average

**43.53**

Submitted Predict Grade Average

**78.85**

Predict Attempted Percentage

**55%**

Total Missed Predicts

**3599**

Student Status:

X

⋮

Choose your filter:

Select Cohort:

2201FT Data Sci... X ⚙️

Select Sprint:

Choose an option ⚙️

Thrive - Module 2

Explore 101

Python For Data Science

Final Exams

Aws Cloud Foundations

Sql For Data Science

Advanced Regression

Data Visualization

Student View

Cohort View

At-Risk View

# Student Tracking Dashboard

Test Grade Average: 17.95

Total Missed Tests: 13794

Predict Grade Average: 71.15

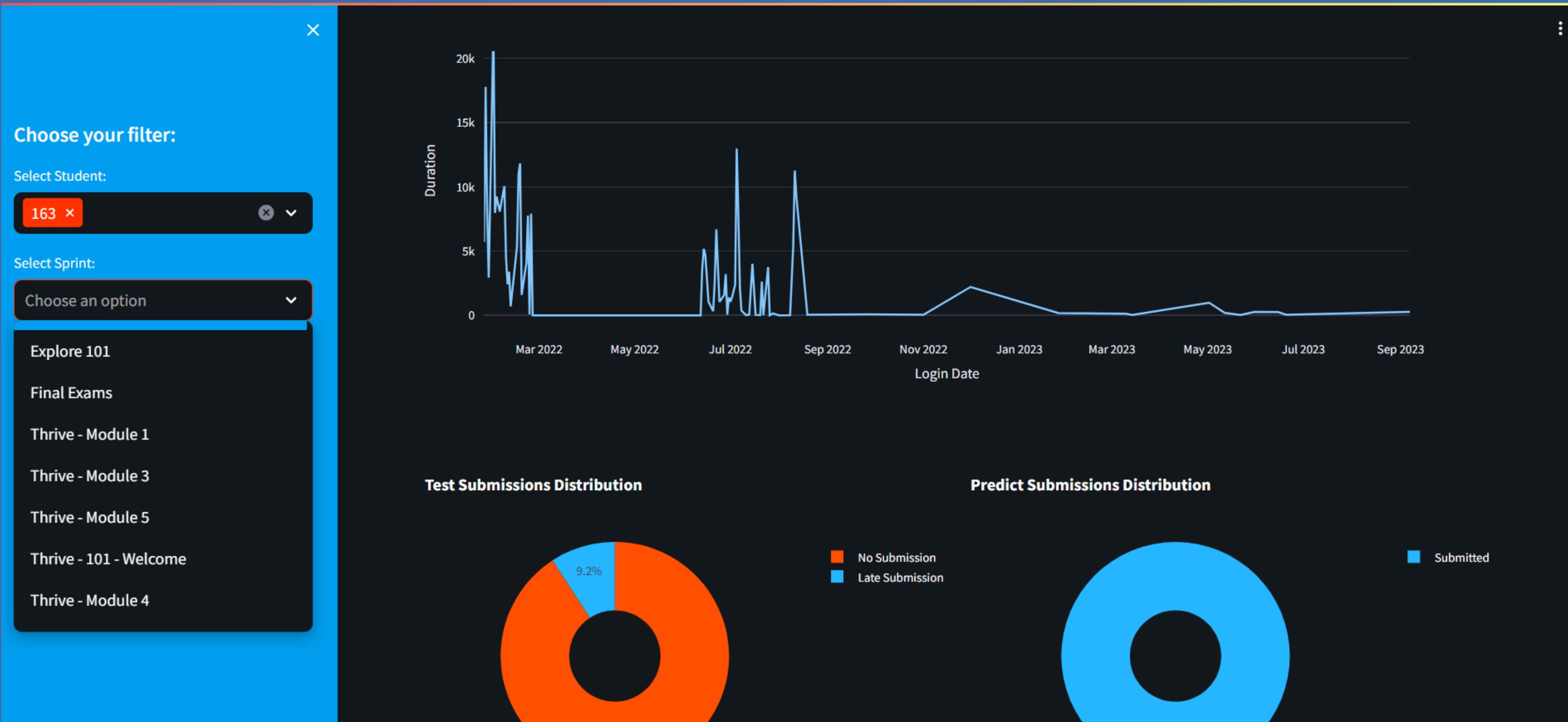
Total Missed Predicts: 146

Test Letter Grade Distribution

Test Submissions Distribution

LETTER GRADE STANDARD

Letter Grade	Standard Range
A	92% - 100%
B	83% - 91%
C	74% - 82%
D	65% - 73%





# RECOMMENDATIONS

# RECOMMEND

- Early Intervention for At-Risk Students
- Tailored Support and Resources
- Cohort-Level Insights
- Automated Notifications



# CONCLUSION



# THANK YOU

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Let's Discuss!