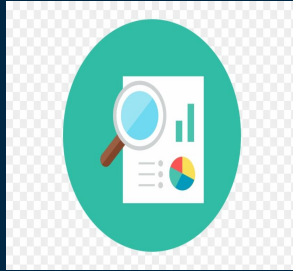


Predictive Analytics on the Academic Record of NUCES.



DATA SCIENCE



ANALYTICS



PREDICTION



VISUALIZATION

Project Team

Obaid Ur Rehman
K17-3848

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K17-3913



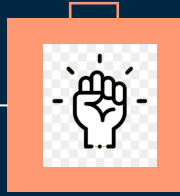
Tooba Shahid
K17-3731

Contents



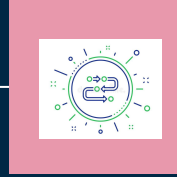
01

Objective



02

Motivation



03

Methodology



04

Conclusion

Objective



1

Factors affecting
Student's
academic
Performance

2

Useful insights
and correlations
between
attributes

6

Functional web
portal



3

Predictive model
building

5

Finding model
with best
accuracy

4

Performance
comparison of
models

Motivation



1 Improving
educational
experiences

3 Appropriate
actions for
improving
success rates

2 Improving
graduation rates

4 Web portal
deployment



Attributes / Features

Gender

Admission
Date

College

Cgpa / Sgpa

Test Score

Department

City

Matriculation
Grade

Graduation
Date

School

Grades and
Attendance

Intermediate
Grade

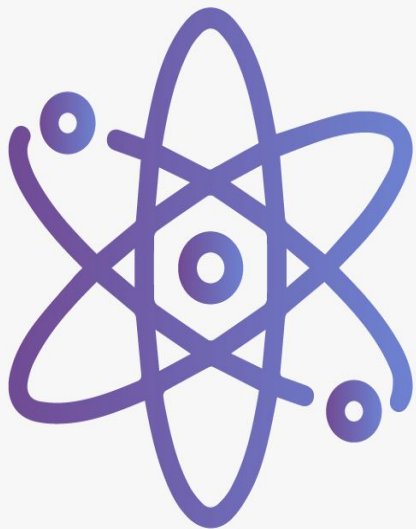
Questions to be answered





- Does there exist any correlation between the city/district (a person belongs to) and their academic performance?
- Does the NU test score affect the academic performance at FAST? What is the correlation between these two?
- What is the correlation between previous grades and the performance at FAST?
- Does the performance in initial CS/EE/BBA courses affect the performance in later ones?
- What role does gender play in academic performance ?
- What is the correlation of a school/college with academic performance at FAST?
- Does the educational background affect the test score?





Methodology



**Data
Understanding
and Pre
Processing**



**Prediction
Model
Development**



**Integration of
Analytics with
System**



Data Understanding and Pre processing



Data Cleaning



Data Integration

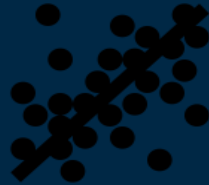


Data Reduction





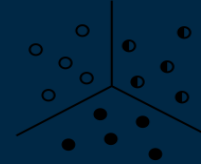
Predictive Model Development



Regression



Decision Tree



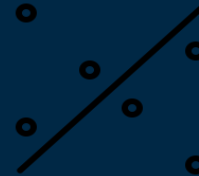
K-means



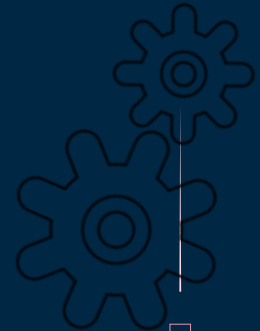
KNN



Random Forest



SVM



Integration of Analytics with System



Features of Web Portal



Data Import



Data Visualization

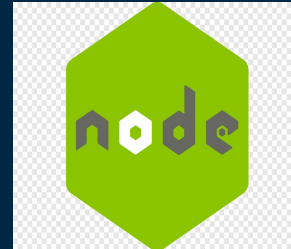
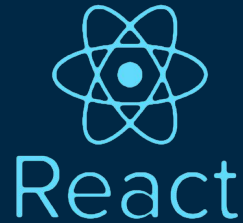


Query Processing



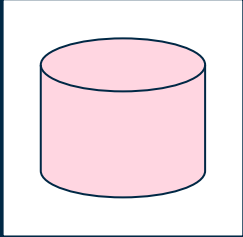
Displaying Predicted Results

Tools & Technologies



Summary

Original Data



Pre Processing



Data Modeling



Website



Deployment



Thank you for listening us!

We will , now , take your queries !

