ENHANCING E-LEARNING WITH MACHINE LEARNING

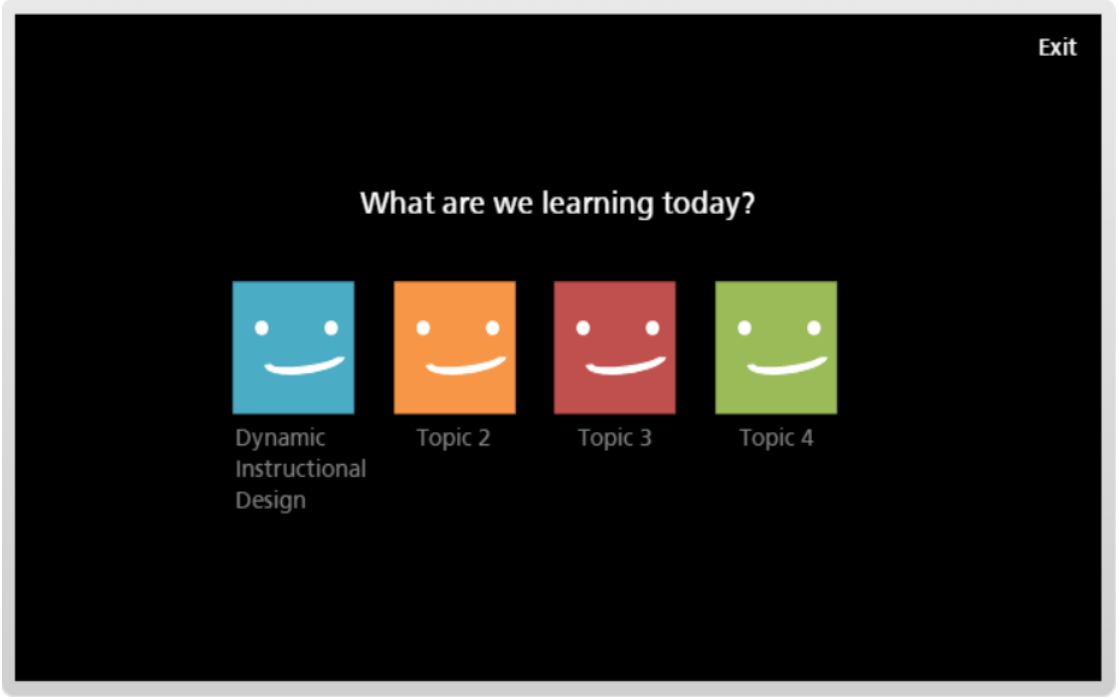
Taha Abbas Ali

BCS-6A

P200119

E-LEARNING AND NETFLIX

Personalized learning has the potential to improve the student performance.



WHAT SHOULD BE INCLUDED?

ADAPTIVE LEARNING

Based on the student's responses, adjust the difficulty of the questions or provide additional assistance.

INTELLIGENT TUTORING

To provide real-time feedback and guidance to students as they work through problems.

PREDICTIVE ANALYTICS

To analyze data on student performance and predict which students are at risk of dropping out or struggling with the course material.

BUT WHY USE ML?

ENGAGEMENT

Improve student engagement and motivation, leading to higher completion rates and better learning outcomes.

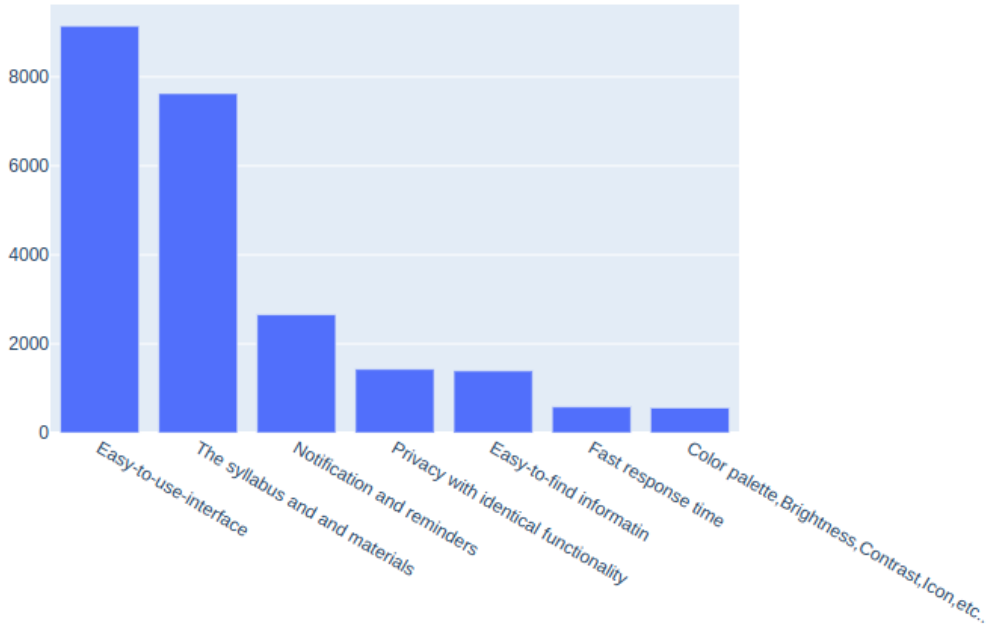
EFFICIENCY

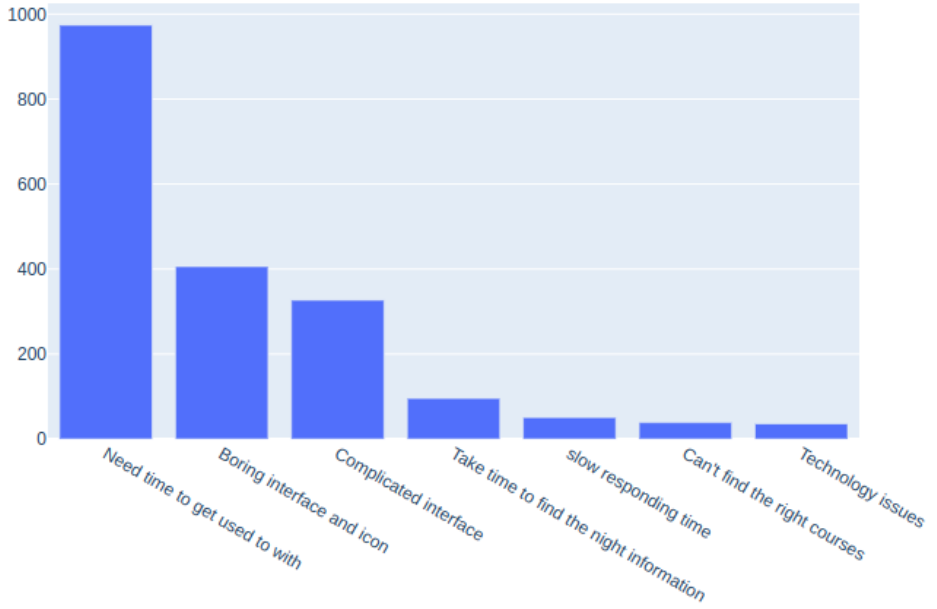
Automate routine tasks, such as grading, and provide instructors with insights and recommendations

SCALABILITY

Analyze large datasets and provide insights that can be used to improve the learning experience

SOME INSIGHTS





SURVEY RESULTS TAKEN FOR CPS PRESENTATION
ARE ADDED HERE

LET'S LOOK INTO NOTEBOOK

Survey results on "ONLINE EDUCATION SYSTEM REVIEW"

Ways and ***AI-Based eLearning*** Platform CAN SHAPE ***ONLINE LEARNING***

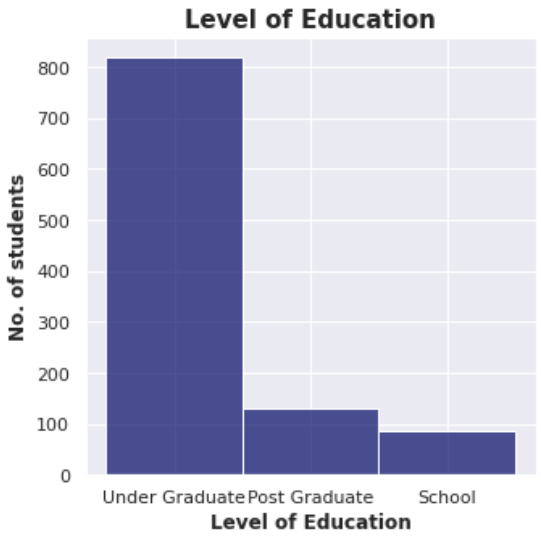
- **REAL TIME QUESTIONING**
- **FRESH LEARNING CONTENT**
- **NLP**
- **PERSONALIZED TUTORING SESSIONS**
- **GAMIFICATION**

EDA

Lets check what the columns mentioned in the dataset says

- 1.Gender – Male, Female.
- 2.Home Location – Rural, Urban
- 3.Level of Education – Post Graduate, School, Under Graduate
- 4.Age – Years
- 5.Number of Subjects – 1- 20
- 6.Device type used to attend classes – Desktop, Laptop, Mobile
- 7.Economic status – Middle Class, Poor, Rich
- 8.Family size – 1 -10
- 9.Internet facility in your locality – Number scale (Very Bad to Very Good)
- 10.Are you involved in any sports? – Yes, No
- 11.Do elderly people monitor you? – Yes, No
- 12.Study time – Hours
- 13.Sleep time – Hours
- 14.Time spent on social media – Hours
- 15.Interested in Gaming? – Yes, No
- 16.Have separate room for studying? – Yes, No
- 17.Engaged in group studies? – Yes, No
- 18.Average marks scored before pandemic in traditional classroom – range
- 19.Your interaction in online mode - Number scale (Very Bad to Very Good)
- 20.Clearing doubts with faculties in online mode - Number scale (Very Bad to Very Good)
- 21.Interested in? – Practical, Theory, Both
- 22.Performance in online - Number scale (Very Bad to Very Good)
- 23.Your level of satisfaction in Online Education – Average, Bad, Good

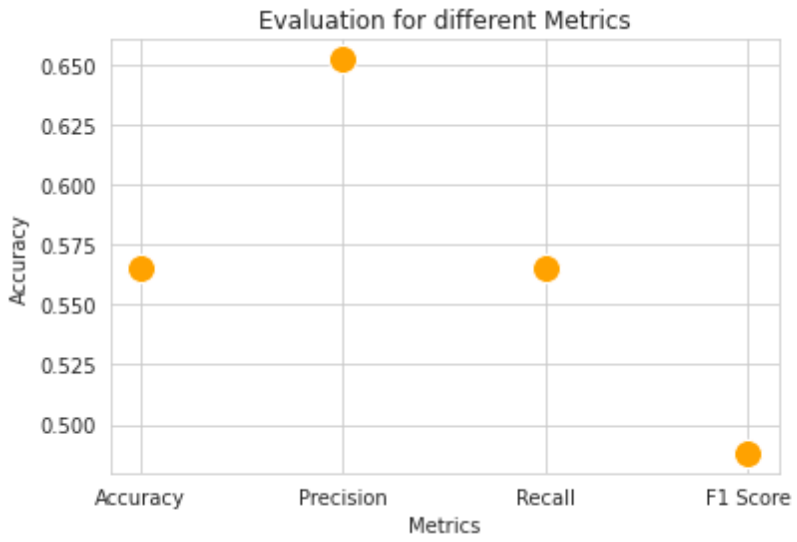
- The dataset have 1033 rows and 23 columns
- 10 numerical and 13 categorical columns
- Having target feature " Your level of satisfaction in Online Education"



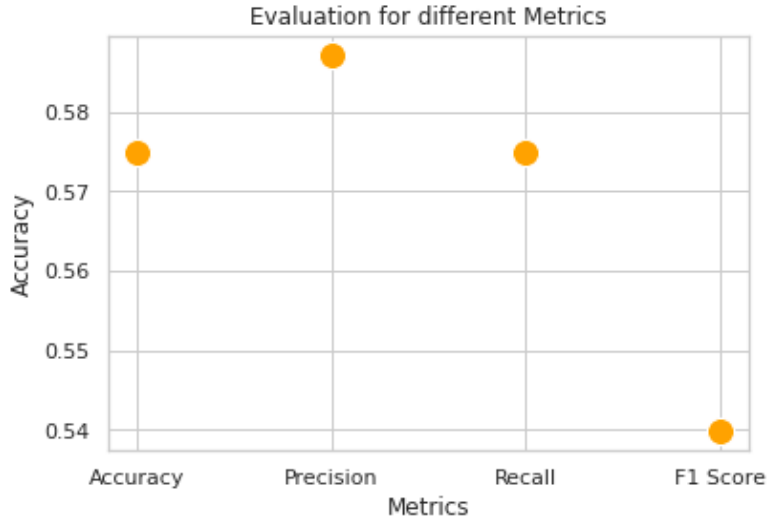
Student engagement with online education

MODEL TRAINED

DECISION TREE



KNN



THESE SHOULD BE ADDED TOO

AUTOMATIC CONTENT GENERATION

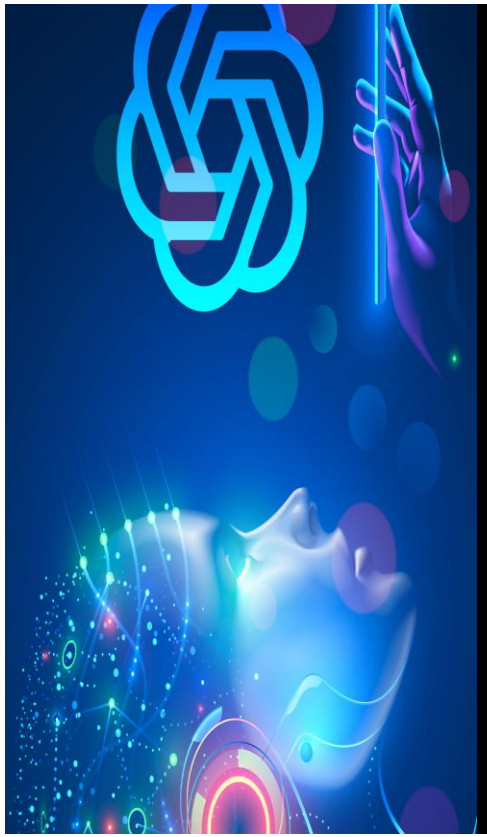
Quizzes, assessments, and summaries for the lecture can help a lot.

COGNITIVE ASSESSMENT

For measuring critical thinking and problem-solving abilities.

GAMIFICATION

To make the learning experience more engaging with challenges, rewards, and leader boards.



THANK YOU FOR LISTENING