

Business Understanding for Predict Student Performance from Game Play

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1 Why came up with this project inspiration

The inspiration for this project came from overhearing a heated debate between two people: Is learning an extremely painful experience? This led us to consider: If learning could be enjoyable, how could we measure whether it truly enhances learning outcomes? Ultimately, we decided on the topic.

2 Educational Technology (EdTech)

When it comes to gamified teaching, a word is involved : educational technology (EdTech). The EdTech market is experiencing significant growth, driven by the rising demand for innovative learning solutions. According to various market reports, global expenditure on education and training is projected to reach \$7.3 trillion by 2025. This growth is fueled by several factors:

1.Increased Adoption of Digital Learning: The COVID-19 pandemic accelerated the shift to online learning, prompting educators to explore new methodologies, including gamification.

2.Engagement through Gamification: Research indicates that gamified learning environments improve student engagement, motivation, and retention of information. As a result, educational games are becoming a crucial component of modern curricula.

3.Personalized Learning Experiences: With advancements in data analytics and artificial intelligence, there is a growing emphasis on personalized learning. Educational games can adapt to individual learning styles, making it easier to cater to diverse student needs.

The integration of technology and gaming into education has transformed traditional learning environments. As educational institutions increasingly adopt game-based learning, the need to understand how these interactive experiences impact student performance has become important. This project aims to leverage data mining techniques to analyze gameplay data and predict academic outcomes, offering valuable insights for educators, students, and game developers.

3 The Importance of Predictive Analysis in Education

also Predictive analysis is increasingly recognized as a powerful tool in education

For students, who are the main beneficiaries, there is a need for engaging and effective learning tools.

For educators, the models can provide insights into optimal educational strategies. This will enable them to enhance student learning and offer personalized learning experiences.

For game developers, incorporating game elements that have been proven to benefit student learning can help them create educational tools. These tools will better align with market demands.

4 Long-Term Vision

Ultimately, the goal is to influence future educational practices by demonstrating the value of predictive analytics in understanding student performance. By contributing to the body of knowledge in this field, the project can inspire further research and development in game-based learning and data analytics.

5 references

1. <https://www.globenewswire.com/news-release/2024/02/13/2827985/0/en/EdTech-Market-Size-to-Grow-USD-549-6-billion-by-2033-Growing-demand-for-customized-education-solutions.html>
2. <https://www.holoniq.com/notes/global-education-technology-market-to-reach-404b-by-2025>

References