• Princess Chulabhorn Science High School Chiang Rai

Sandbox game for English study

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PROBLEM

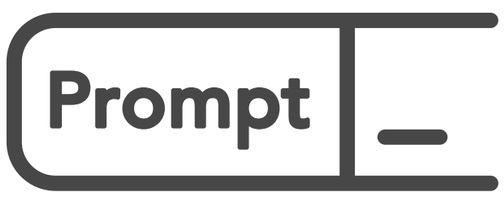
Vocabulary Retention Challenges

Stress and Depression

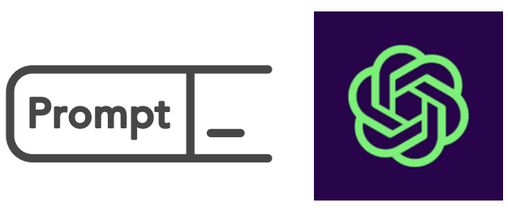
Lack of job opportunities

Lack of communication skills

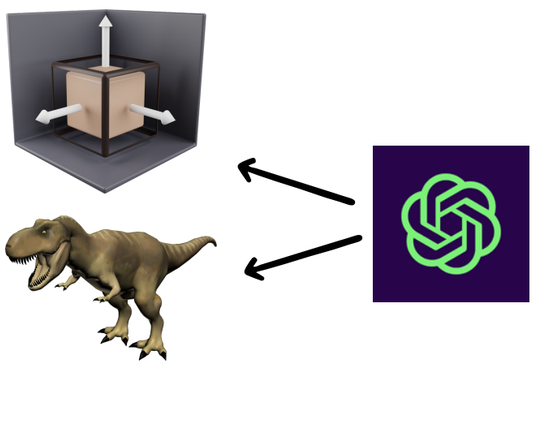
FRAMEWORK



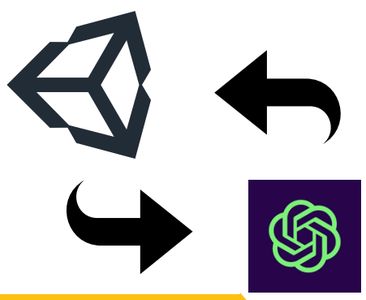
The player inputs a text prompt in Unity.



Unity sends the prompt to the Shap-E model.

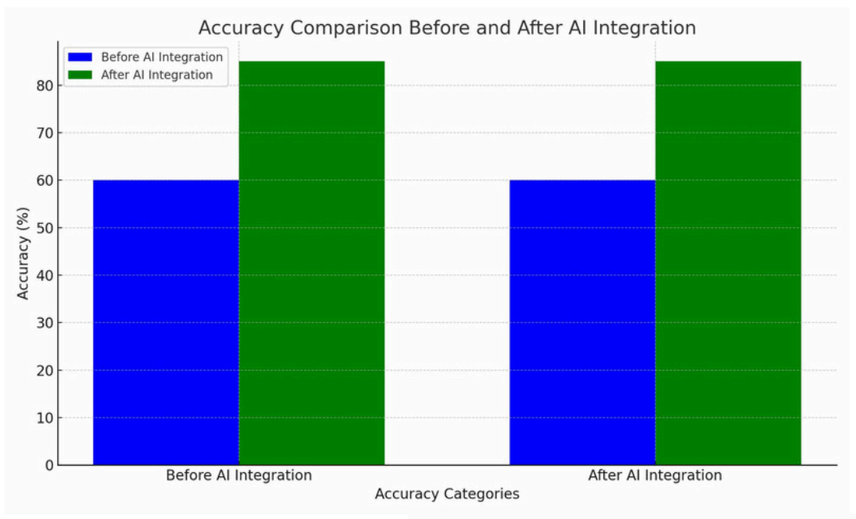


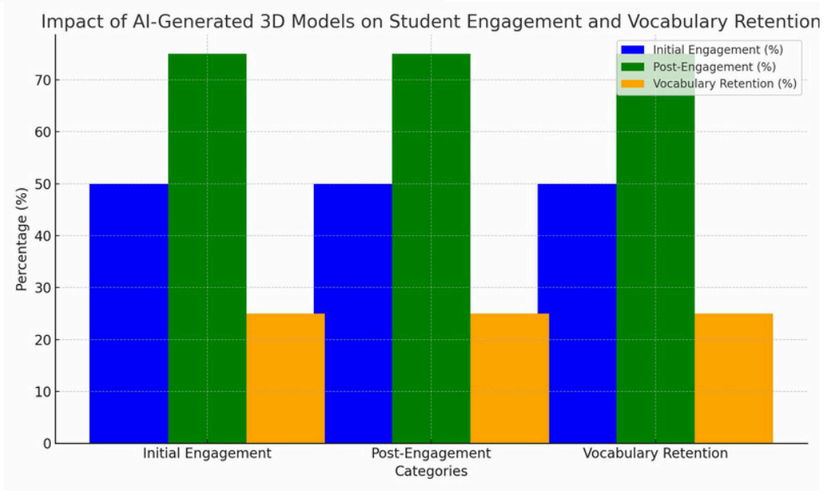
Shap-E processes the prompt and generates a 3D model.



The 3D model is returned to Unity for use in the game.

FINDING





The AI model (Generative 3D Model) increased student engagement from 50% (blue) to 75% (green) in the game sandbox, but vocabulary retention remained low at 25% (orange). Additionally, AI integration improved accuracy from 60% (blue) to 80% (green), highlighting its positive effect on system performance

INTERPRETATION AND CONCLUSION

The AI-generated 3D models significantly improved student engagement in the game sandbox, with initial engagement increasing from approximately 50% to 70%. However, vocabulary retention remained low at around 25%, indicating the need for further enhancement.

The accuracy comparison chart shows that AI integration positively affected performance, with accuracy rising from 60% before integration to 80% after integration.

REFERENCE

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