

TOWARDS LEARNER PERFORMANCE EVALUATION IN IVR LEARNING ENVIRONMENTS USING EYE-TRACKING AND MACHINE-LEARNING

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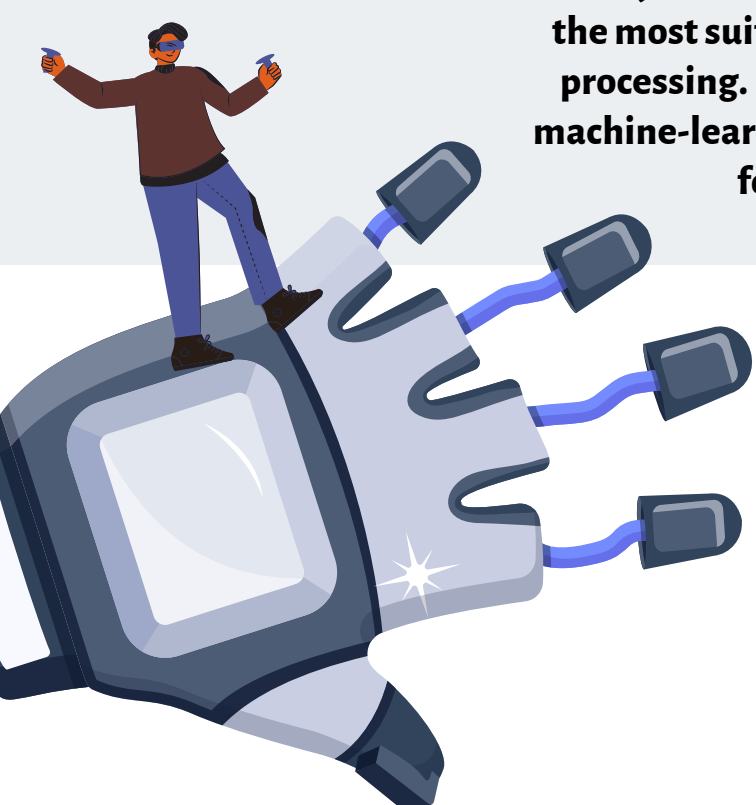
INTRODUCTION

At present, the use of eye-tracking data in **immersive Virtual Reality (iVR)** learning environments is set to become a powerful tool for maximizing learning outcomes, due to the low-intrusiveness of eye-tracking technology and its integration in commercial iVR Head Mounted Displays.



METHODOLOGY

The objective of this research is to identify the most suitable technologies for data processing. In this research, the use of machine-learning techniques is proposed for that purpose.



An iVR learning experience simulating the operation of a bridge crane was developed.



The performance of **63 students** was evaluated.

CONCLUSIONS

The results showed that different classifiers (KNN, SVM and Random Forest) provided the highest accuracy when predicting learning performance variations.

The accuracy of user learning performance was **still far from optimized.**



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