

Conference Name: EduCon Kuala Lumpur – International Conference on Education, 01-02 December 2025
Conference Dates: 01-Dec- 2025 to 02-Dec- 2025
Conference Venue: Hotel Capitol, Bukit Bintang, Kuala Lumpur, Malaysia
Appears in: PUPIL: International Journal of Teaching, Education and Learning (ISSN 2457-0648)
Publication year: 2025

Adam Ka Lok Wong, 2025

Volume 2025, pp. 573-574

DOI- <https://doi.org/10.20319/ictel.2025.573574>

This paper can be cited as: Wong, A. K. L. (2025). Using Machine Learning to Find the Important Features of Student-Created Screencasts for Authentic Assessment. EduCon Kuala Lumpur – International Conference on Education, 01-02 December 2025. Proceedings of Teaching & Education Research Association (TERA), 2025, 573-574

USING MACHINE LEARNING TO FIND THE IMPORTANT FEATURES OF STUDENT-CREATED SCREENCASTS FOR AUTHENTIC ASSESSMENT

Adam Ka Lok Wong

Division of Science, Engineering and Health Studies, School of Professional Education
& Executive Development, The Hong Kong Polytechnic University, China

spklwong@speed-polyu.edu.hk

Abstract

The rise of generative AI tools like ChatGPT offer both opportunities and challenges in education. When used correctly, these tools help students learn by providing ideas, outlines of essays and sources of information. However, these tools also raise concerns about plagiarism. Current detection software struggles to identify AI-generated content, as students can easily produce essays or program code without understanding the material. This misuse undermines learning and creates academic dishonesty. Therefore, educators should design assignments that promote active learning without relying on AI-detection software. One approach to achieving this aim is requiring students to explain their work using screencasts. A screencast is a video capturing one's screen output and activities, as one works on the computer. While reviewing student-created screencasts (SCSs) requires effort by teachers, AI can assist in streamlining the process. The objective of this study is to identify the key features of student-created screencasts that are important for authentic assessment using AI-assisted tools. This study examined the screencasts submitted by undergraduates in information technology and language subjects. It uses machine learning to find out which aspects of screencasts as assignments are essential for authentic assessment. The results of the study contribute to future studies related to student-created screencasts for promoting active learning.

Keywords:

Screencast, Video Attributes, Active Learning, Machine Learning, Artificial Intelligence

Acknowledgement:

The work described in this paper was fully supported by a grant from the Research Grants Council of the Hong Kong Special Administrative Region, China (RGC Project Ref No. UGC/FDS24/H24/24).