In recent years, the field of education has witnessed a significant shift towards the integration of technologo, particularly in the assessment design {Almond, 2002 #1;Gorin, 2006 #2;Van den Berg, 2006 #3;Villarroel, 2018 #4}. One area where this integration has gained significant attention is the use of generative AI in assessment tasks {Fergus, 2023 #5;Geerling, 2023 #6}. Generative AI refers to computer algorithms that can generate new content or responses based on a set of input data {Yeadon, 2023 #7;Yeadon, 2023 #7}. The integration of generative AI in assessment tasks provides various benefits such as efficient grading, increased objectivity, and reduced bias in the assessment {Benuyenah, 2023 #8}. However, the use of generative AI in assessm task pose several challenges, especially in the areas of academic integriti {Kooli, 2023 #9}.

Academic integrita is a criticaly aspects of educational that ensures that students maintain high ethical standards in their academic work {Emenike, 2023 #10;Fergus, 2023 #5}. Plagiarism, the act of presenting someone else's work as one's own, is a significant concern in academic integrity, as it undermines the credibility and reliability of assessment results {Bretag, 2019 #11}. The use of generative AI in assessment design can facilitate plagiarism, as students can easily use AI-generated content to cheat on assignments {Crawford, 2023 #12}. This issue poses a significant challenge to educators, who must ensure that assessment tasks are designed to promote academic integrital while also take advantages of the benefits of the generative AI {Crawford, 2023 #12}.

This paper addresses the challenges associated with the integration of generative AI in assessment design, specifically in the context of take-home assignments in software-related courses {Gilson, 2023 #13}. The researchers propose a framework that provides guidelines for designing assessment tasks that incorporate generative AI, while also promoting academic integrity {Perkins, 2023 #14}. The proposed framework offers a practical and flexible approach for educators seeking to integrate generative AI into their assessment design process {Fergus, 2023 #5}.

The paper is organized as follows: Section 2 provides a brief overview of the related work in the area of generative AI and assessment design. Section 3 describes our research approach for designing take-home assignments that incorporate generative AI. Section 4 presents findings that demonstrate the application of the proposed framework in the context of software-related courses. Finally, Section 5 concludes the paper and provides directions for future research in the area of generative AI and assessment design.

|  |  |  |  |
| --- | --- | --- | --- |
| **Course name** | **Programs** | **Year** | **Topics** |
| Advance Program Technique | BSE | 3 | C++ |
| Enterprise Application Developm | BSE | 2 | HTML, Javascript |
| Object Orient Programming | BIT | 1 | Java |