Enhancing Engineering Education: Integrating Virtual Reality into Mechatronics Laboratories

Ashita Robin Shandilya, Kunal Hiraman Borase, Kiran Sukdev Kedare
Kanchan Shrikant Aher, Vasim H Mansuri
Mechatronics Department
Guru Gobind Singh Polytechnic, Nashik

Abstract*: The advancement of technology has significantly impacted the engineering field, and the education system must evolve to meet the demands of modern industry. One such technology is Virtual Reality (VR), which holds immense potential in enhancing engineering education, particularly in the discipline of mechatronics. This paper explores the integration of VR into mechatronics laboratories as a tool to bridge the gap between theoretical learning and practical application. It discusses the benefits, challenges, and strategies for the implementation of VR in mechatronics education and proposes a framework for its effective integration. The research aims to demonstrate how VR can augment traditional teaching methods, providing students with immersive, hands-on experiences that are both cost-effective and scalable.*

Keywords: integration of VR