REPORT ON

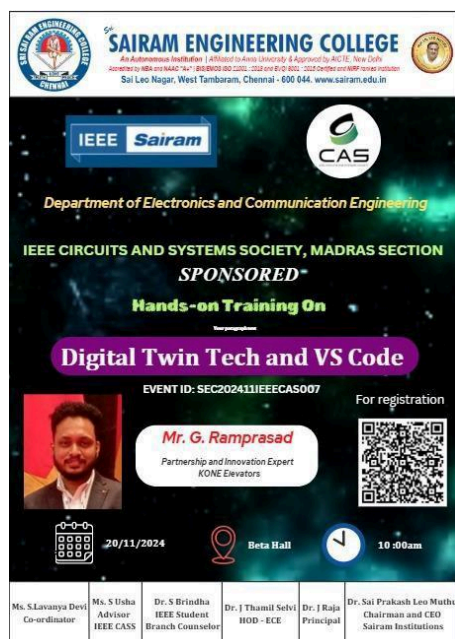## HANDS-ON TRAINING ON DIGITAL TWIN AND VS CODE

by IEEE CAS Society (CASS) SBC60981AG

OBJECTIVE

The primary aim of this hands-on training was to introduce participants to the concept of Digital Twin Technology and familiarise them with its implementation using Visual Studio Code (VS Code). This workshop aimed to enhance the knowledge of IEEE CASS student members in emerging technologies and equip them with practical skills for real-world applications.

By the end of the session, attendees were expected to have a clear understanding of Digital Twin systems, their applications, and the role of VS Code as a development environment for such projects.

INTRODUCTION

On 20/9/2024, the IEEE Circuits and Systems Society (CASS) Student Branch, in association with the Department of Electronics and Communication Engineering, Sri Sairam Engineering College, organized a one-day hands-on training session on Digital Twin Technology and VS Code. The event was sponsored by **IEEE Circuits and Systems Society, Madras Section.**

The session was conducted by **Mr. G. Ramprasad,** *Partnership and Innovation Expert at KONE Elevators*, who provided in-depth insights and practical demonstrations on the integration of Digital Twin concepts into real-world applications.

This event was designed to bridge the gap between theoretical knowledge and practical applications, enabling students to understand cutting-edge concepts in system simulation and software tools effectively.

Sponsored by	IEEE Circuits and Systems Society, Madras Section
Organised by	IEEE Circuits and Systems Society SEC SB Chapter
Speaker	Mr. G. Ramprasad

Chief Advisor and Coordinator	Ms.S.Usha
Co-Coordinator	Ms.S.Lavanya Devi
Mode of event	Offline
Date	20th Nov 2024
Timing	From 10:00 am

EVENT DESCRIPTION:

Mr G.Ramprasad began the session by highlighting the future scope of Digital Twin technology, its uses and advantages for both student branches and professional IEEE members. He elaborated on the key features of Digital Twin technology:

1. **Domains:** The domains involved in the technology such as IOT, AIML and ECE and its Importance.
2. **Various levels:** The levels of integration such as field device level, automation level and management level was explained clearly along with the components used at the particular level.
3. **Simulation:** Simulation of various models was shown and how to simulate them.
4. **Tools:** Tools used for the Digital Twin technology such as Jupyter Notebook, VS code, Azure twin was introduced to the students.

The session was interactive, and Mr.G.Ramprasad ensured that students had the opportunity to ask questions and gain hands-on experience with the platform. He showcased live demonstrations on how to create and manage models in Autodesk platform, providing tips on how to create models and how it would greatly help our projects.

Conclusion:

By the end of the session, students gained a comprehensive understanding of how to use Digital Twin technology and the tools efficiently. The knowledge shared will undoubtedly enhance the student branch's capability to think bigger and revolutionize society.

The session was well-received by the participants, who appreciated the practical insights and the

opportunity to learn about this powerful technology. This event marks another successful initiative by the IEEE CASS Student Branch to equip its members with the skills and resources necessary for active participation in IEEE's global network.