**Event name:** Design and Simulation of Smart Agriculture Robot

**Event Date:** 9th – 11th MAY 2023

**Event Venue:** Vidya Jyothi Institute of Technology , Aziz Nagar, Chilkur Balaji road, Himayat Sagar rd. Hyderabad, Telangana 500075.

**No.of participants :** 60.

**Smart Agriculture Robot**

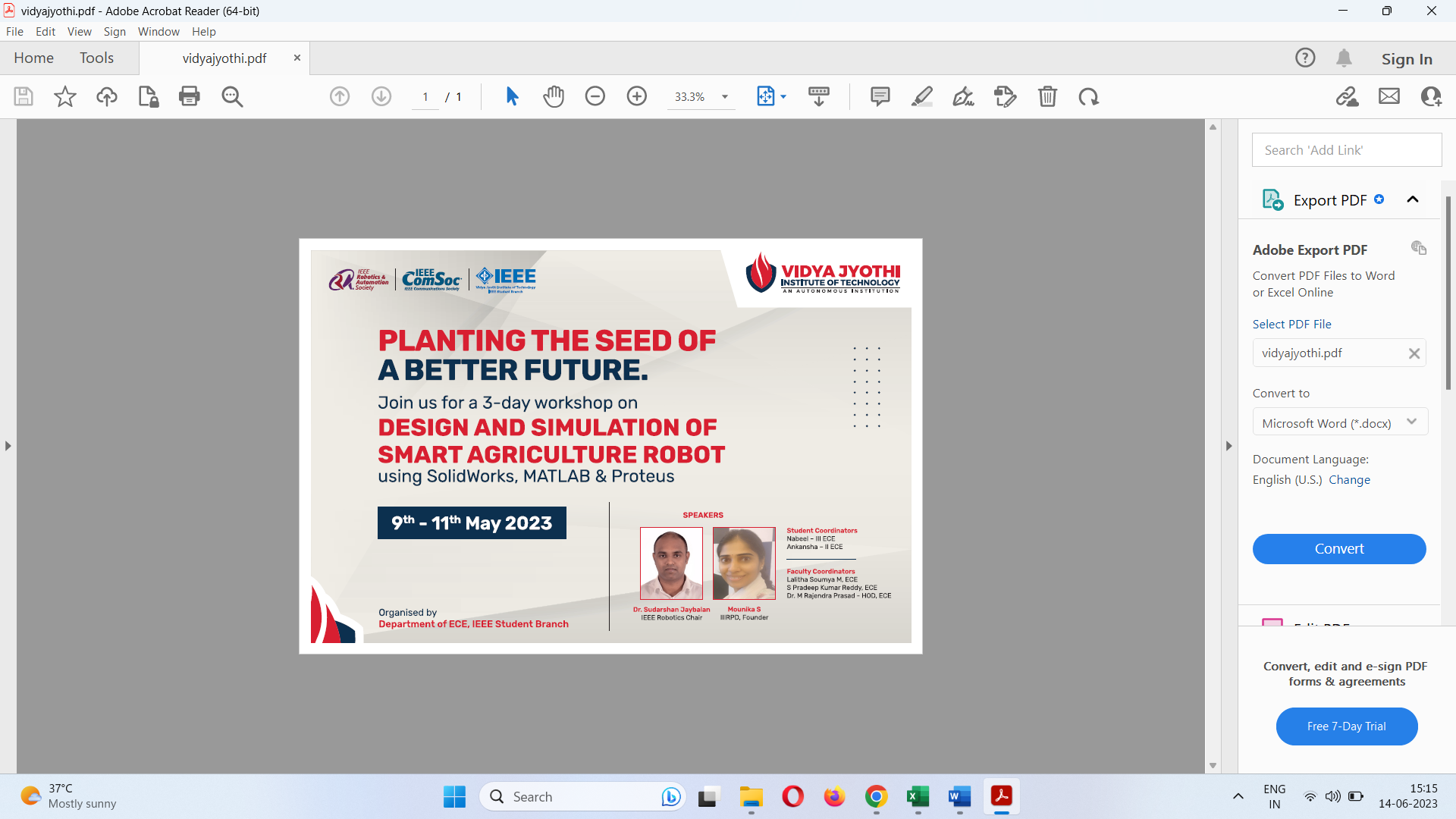
The three-day workshop on smart Agriculture Robot provided an exceptional learning experience, encompassing various aspects of robotics, 3D modeling, simulation, electronic circuit design, and IoT.

On the first day, participants focused on 3D modelling of 5DoF robotic arm using SolidWorks and the assembly of a robotic arm. They gained practical experience in creating virtual models and constructing the physical robot.

The second day of the workshop delved into advanced topics. Participants worked with SolidWorks and MATLAB co-simulation, allowing them to simulate and analyze the performance of the robotic arm. They also had the opportunity to work with Proteus electronic circuit simulation software, which enabled them to design and simulate electronic circuits related to the robotic arm and its control system. This addition provided a comprehensive understanding of the system, from mechanical design to electronic circuitry and control simulation.

The third day of the workshop centered around the smart Agriculture Robot and IoT. Participants explored the integration of IoT technologies, including sensors and actuators, to enhance agricultural processes. They also learned how to develop an Android app using Kodular app development, enabling wireless control of the robot. Additionally, participants gained insights into cloud connectivity through IoT using platforms like Google Firebase.

Overall, the three-day workshop covered a wide range of topics, including 3D modeling, robotic arm assembly, simulation with SolidWorks and MATLAB, electronic circuit design using Proteus, IoT integration, and app development using Kodular. This holistic approach equipped participants with practical skills and knowledge in multiple domains, fostering their understanding of smart agriculture and its applications.



A picture containing text, indoor, presentation, projection screen

Description automatically generated

A person standing in front of a projector screen

Description automatically generated with medium confidenceA person working on a machine

Description automatically generated with low confidenceA group of people sitting at computers

Description automatically generated with medium confidenceA group of people in a room

Description automatically generated with low confidence