SurTech

Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex

(Formerly Known as Dr. Sudhir Chandra Sur Degree Engineering College)

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Report of the Webinar on Condition Monitoring of Biomedical Signals: A Paradigm Shift from Feature Engineering to Explainable AI

Organized by

CSE and CSE-Allied Department

Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex

Title: **Condition Monitoring of Biomedical Signals: A Paradigm Shift from Feature Engineering to Explainable AI**

Speaker: Dr. Biswarup Ganguly

About the Speaker: Assistant Professor, Department of Electrical Engineering at National Institute of Technology, Silchar,

Date and Time: 14/08/2025 from 07.00 PM to 09.00 PM

Mode: Online

Number of Participants: 101

Objective: To explore the transition from traditional feature engineering methods to explainable AI techniques in condition monitoring of biomedical signals, highlighting their potential for improving transparency, accuracy, and clinical trust.

CSE and CSE-Allied Department of Dr. Sudhir Chandra Sur Institute of Technology and Sports Complex has organized a Webinar on "Condition Monitoring of Biomedical Signals: A Paradigm Shift from Feature Engineering to Explainable AI" for the 2nd, 3rd, and 4th year students of CSE and CSE-Allied Department on 14/08/2025 from 07.00 PM onwards on the Google Meet platform to make the students aware of current research biomedical engineering and health care. Dr. Biswarup Ganguly, Assistant Professor, Department of Electrical Engineering at National Institute of Technology, Silchar, was the invited speaker of the webinar. Total 100 students were attended the webinar.

Outcome: Students are able to understand how explainable AI is reshaping the landscape of condition monitoring in biomedical signals. They will be able to appreciate the limitations of conventional feature engineering approaches, recognize the advantages of integrating explainable AI for enhanced interpretability and trust, and understand real-world applications in clinical decision-making. Furthermore, students will develop insights into the future research directions and practical tools that can

aid in bridging the gap between AI-driven analytics and healthcare practice.

The expert was felicitated by Dr. Amrut Ranjan Jena, HOD, CSE Department. The event was coordinated by Dr. Amitava Halder, Assistant Professor of CSE Department. The session was moderated by Ms. Rebeka Sultana, Assistant Professor of CSE Department. The session concluded with a vote of thanks delivered by Dr. Amitava Halder.

Webinar on Condition Monitoring of Biomedical Signals: A Paradigm Shift from Feature Engineering to Explainable AI dated on 14/08/2025

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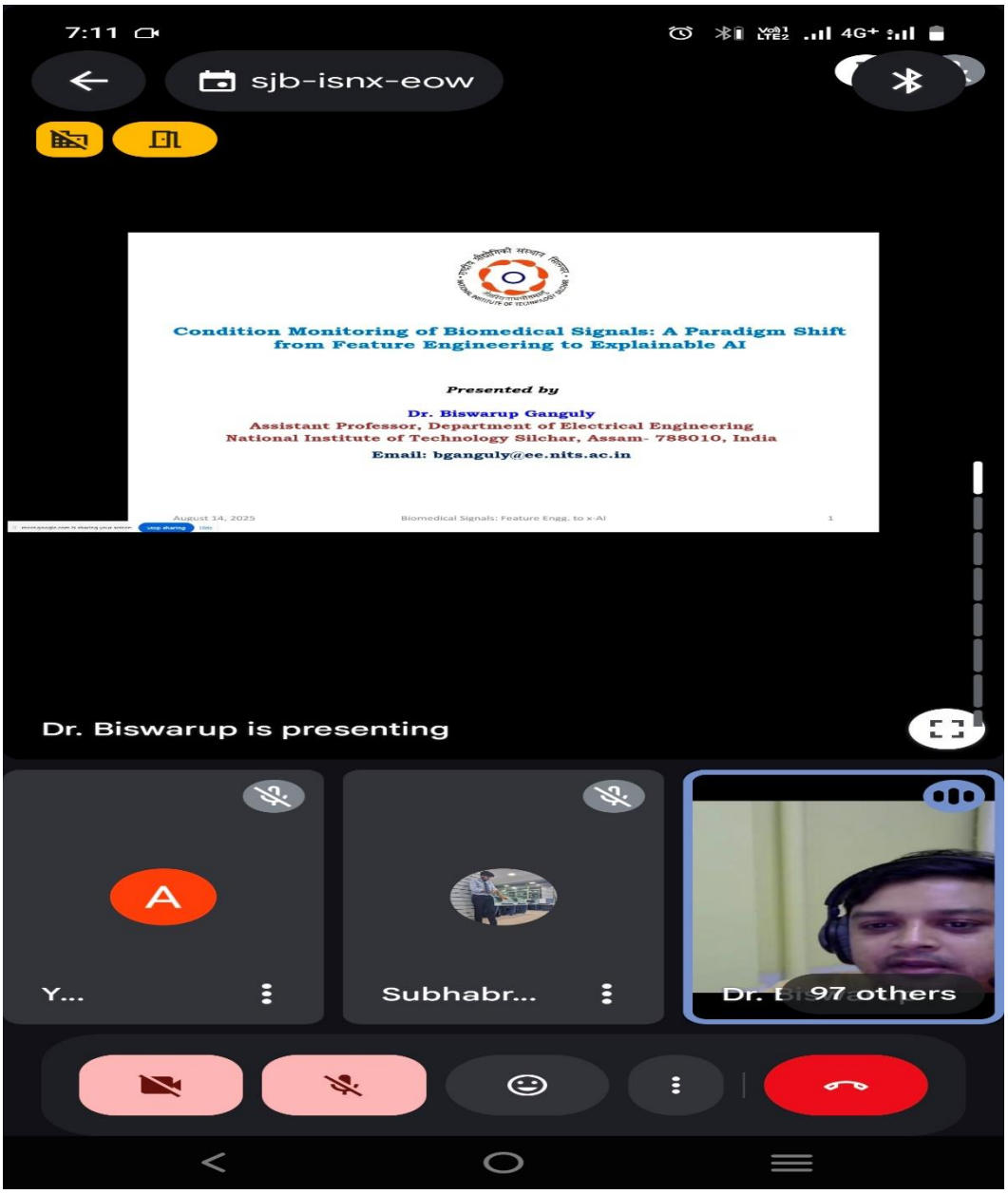

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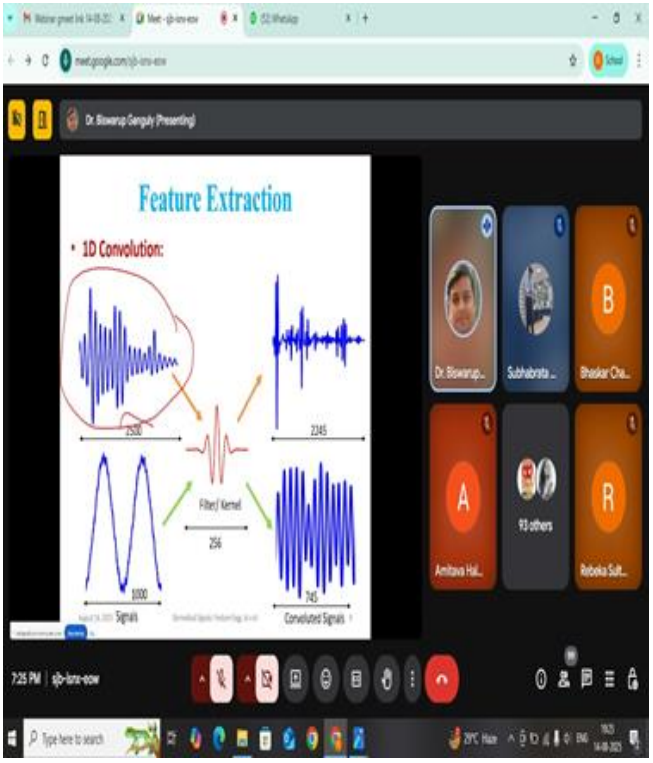

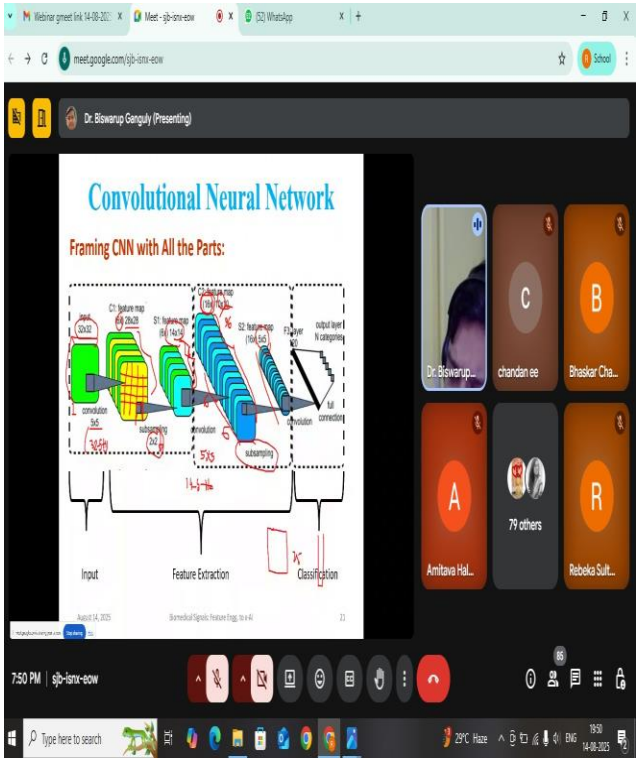

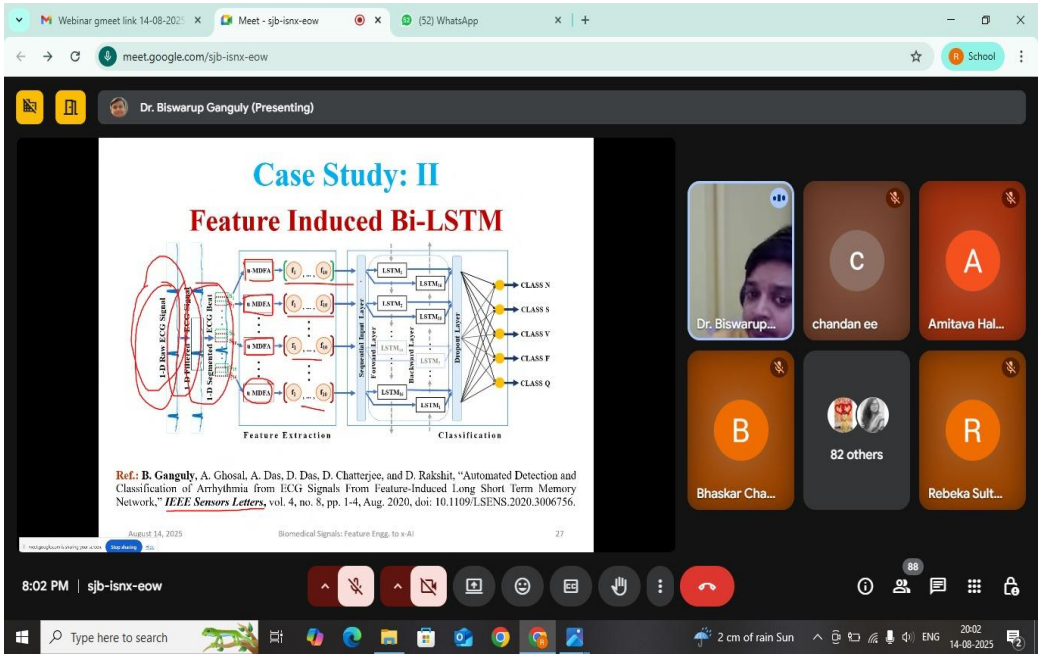

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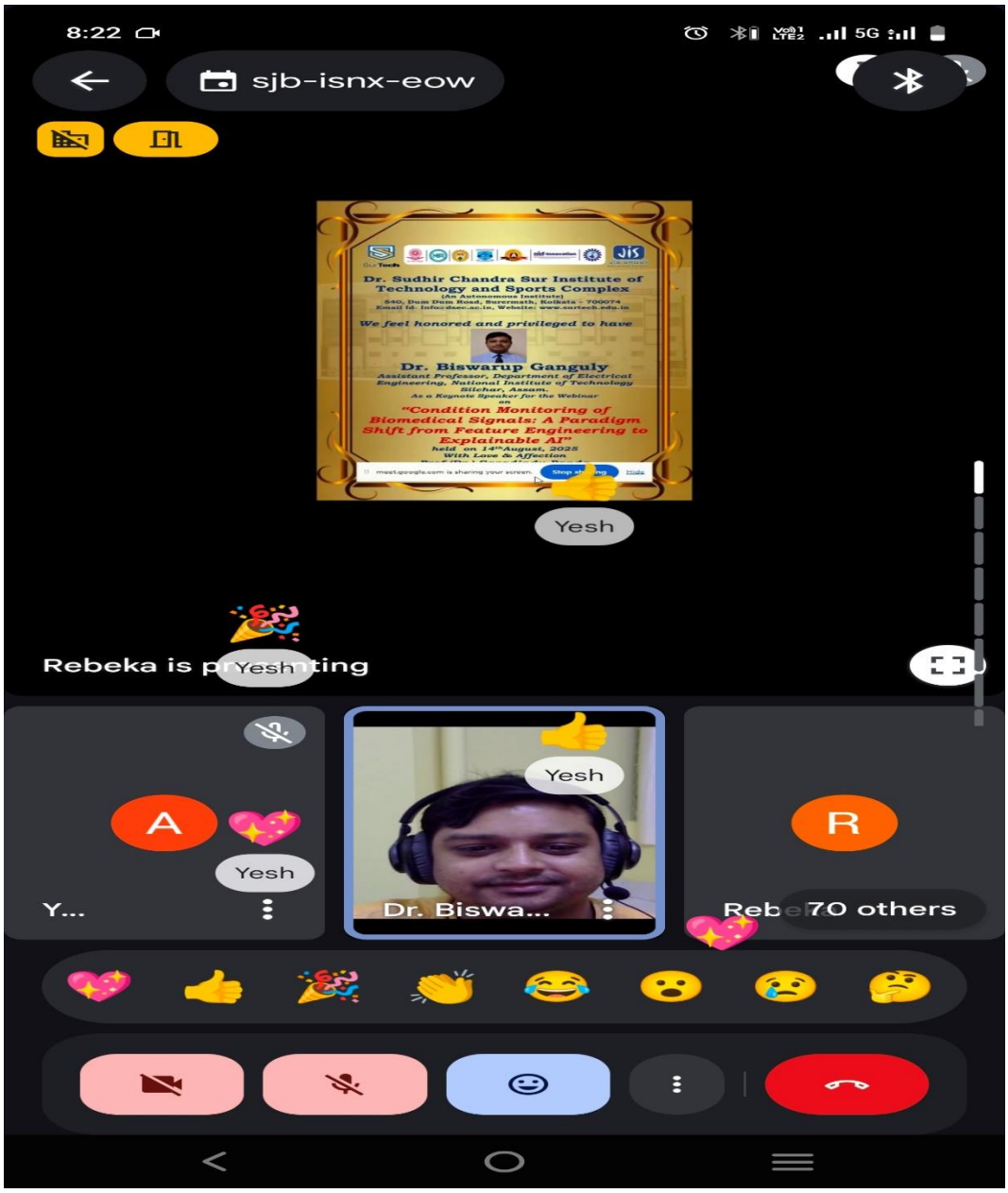

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