A Seminar on

Wearable Electronics and AI

Dr. P. H. Zope

Computer Engg

Activity Report

Academic Year	2024-25
Program Driven by	A Seminar on Wearable Electronics and AI
Quarter	III
Program / Activity Name	Capacity Building Program
Program Type	
Program Theme	Innovation and startups
Start Date	08.03.25
End Date	08.03.25
Duration of the Activity (in Mins)	60
Number of Student Participant	0
Number of Faculty Participant	70
Number of external Participant	--
Expenditure Amount in Rs.	
Any Remark	--
Mode of Session Delivery	Offline
Objective	
Benefit in terms of Learning / Skills / Knowledge obtained	
Feedback	
Video url (mp4)	
Photograph 1 (jpg)	Attached
Photograph 2 (jpg)	Attached
Overall report of the Activity (pdf)	As given below

Dr. P. H. Zope
Convener IIC

Event Report
Title: *A Seminar on Wearable Electronics and AI*
Organized By: Department of Computer Engineering, SSBT's College of Engineering and Technology, Bambhori, Jalgaon
Speaker: Dr. P. H. Zope, Associate Professor, Department of Computer Engineering
Participants: Students and Faculty Members from Computer Engineering and Related Branches

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Objectives

- To introduce students to the emerging field of wearable electronics and its integration with Artificial Intelligence (AI).
- To highlight real-world applications of wearable technology in healthcare, fitness, lifestyle, and industry.
- To discuss AI-driven data processing and its role in enhancing wearable device functionalities.
- To encourage research, innovation, and interdisciplinary collaboration among students.

Event Overview

The Department of Computer Engineering organized an insightful seminar on *"Wearable Electronics and AI"* presented by **Dr. P. H. Zope**, an expert in embedded systems and intelligent computing.

The session commenced with a welcome address and introduction of the speaker. Dr. Zope began by outlining the evolution and rapid advancements in wearable technology, followed by a deep dive into how AI is revolutionizing data collection, analysis, and decision-making in these systems.

The seminar was attended by students from the Computer Engineering Department as well as participants from allied branches such as Electronics and Instrumentation.

Topics Covered

- Introduction to Wearable Electronics: Types, Components, and Trends
- Integration of Sensors with Microcontrollers and Wireless Communication
- AI in Wearables: Machine Learning Algorithms, Data Processing, and Predictive Analytics

- Applications in Healthcare (e.g., smartwatches, ECG monitors, fall detection devices)
- Wearables in Fitness, Sports, and Industrial Safety
- Challenges in Wearable Device Design: Power Management, Miniaturization, and Data Security
- Future Prospects and Emerging Research Areas in Wearable AI

Session Highlights

- Demonstration of real-world case studies where AI-enabled wearables have improved health outcomes and user experience.
- Discussion on how AI models such as decision trees, neural networks, and SVMs are embedded into low-power devices.
- Overview of ongoing research and student project ideas in the domain of smart wearables and intelligent systems.
- Interactive Q&A session, where students asked technical and career-related questions related to wearable technology.

Outcomes

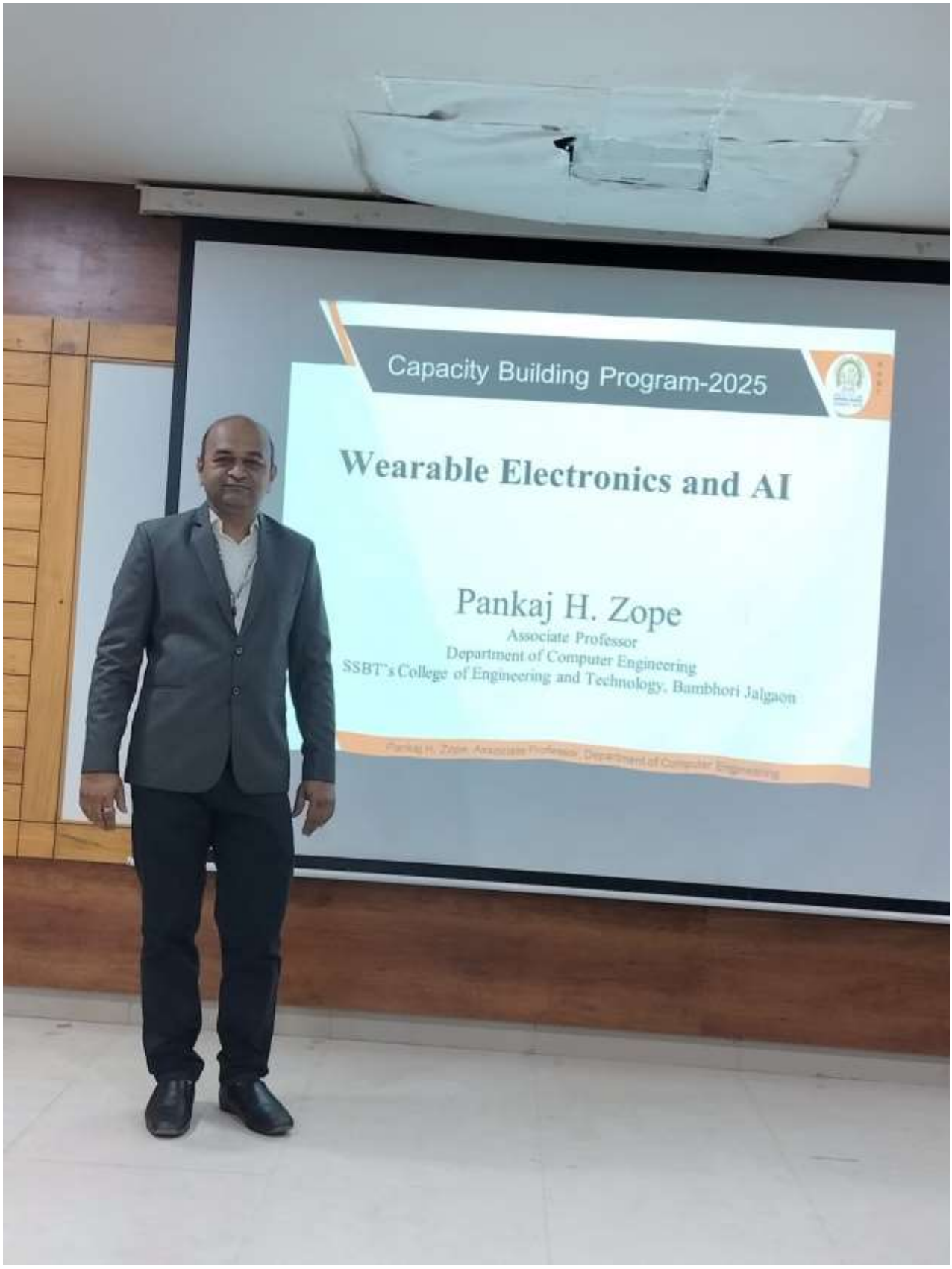
1. **Enhanced Understanding**: Participants gained a foundational and practical understanding of wearable electronics integrated with AI.
2. **Interdisciplinary Awareness**: Students appreciated the cross-functional nature of wearable systems involving electronics, computer science, and AI.
3. **Research Motivation**: Several attendees expressed interest in taking up final-year projects or research on wearable health tech and smart systems.
4. **Idea Generation**: The seminar sparked discussions around building innovative, low-cost wearable prototypes for local community needs.
5. **Faculty Collaboration**: Encouraged collaborative mentoring between departments for interdisciplinary project guidance.

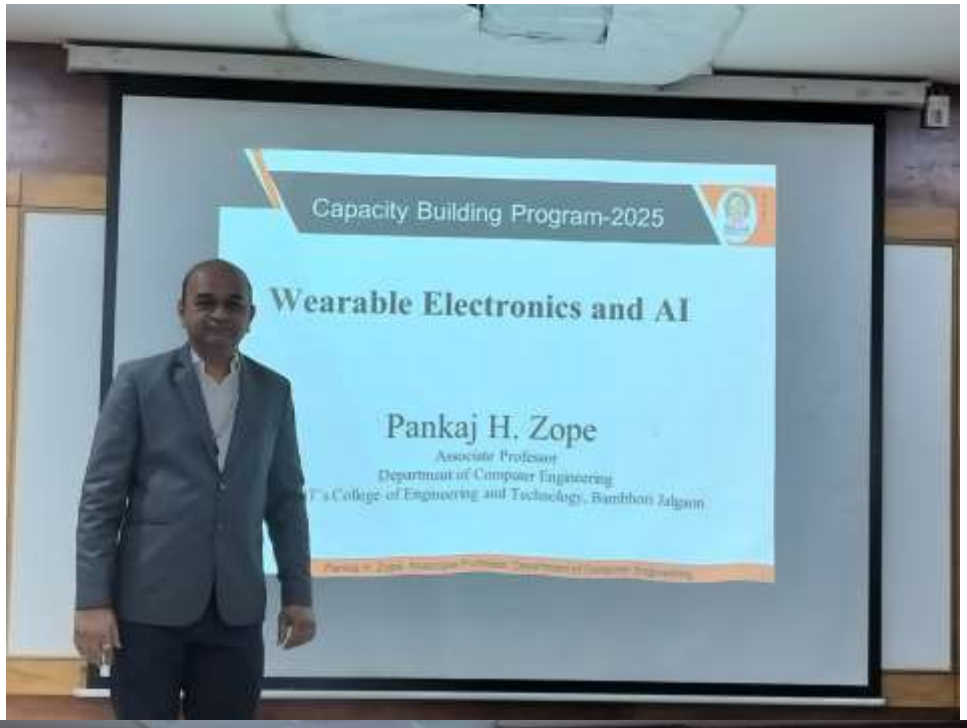
Feedback

- Students found the seminar highly informative, especially the live examples and AI application explanations.
- Many requested a hands-on workshop or a mini-course series on designing wearable devices and applying AI models.
- Faculty members praised the relevance of the topic and suggested integrating it into curriculum-linked seminars.

Conclusion

The seminar on *Wearable Electronics and AI* delivered by Dr. P. H. Zope was an inspiring and informative session that successfully bridged theoretical knowledge and emerging technological trends. It empowered students to explore wearable technologies and AI integration with renewed interest and enthusiasm. The Department of Computer Engineering looks forward to organizing more such impactful seminars to nurture innovation and technical excellence among students.


Capacity Building Program-2025
Wearable Electronics and AI
Pankaj H. Zope
Associate Professor
Department of Computer Engineering
SSBT's College of Engineering and Technology, Bambhori Jalgaon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Department of Computer Engineering


MIT Lab


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