AI CONCLAVE 2.0

Silver Oak University IEEE Signal Processing Society Student Branch Chapter

AT A GLANCE

AI Conclave 2.0, hosted by IEEE Signal Processing Society Gujarat Chapter, Silver Oak University IEEE Student Branch, and IEEE SOU SPS SBC with GDG on Campus SOU, was a key gathering spotlighting the evolving landscape of Signal Processing and its link to Artificial Intelligence. The event drew a diverse audience eager to explore real-world applications. With sessions spanning Machine Learning, Computer Vision and Satellite Communication, it featured thought-provoking discussions and broadened participants' understanding of cutting-edge innovations.

BENEFITS

1. **In-depth Knowledge of Emerging Technologies**
   Attendees explored the convergence of Signal Processing and Artificial Intelligence, gaining valuable insights into how these technologies are shaping modern innovations across various sectors.
2. **Networking Opportunities**
   The event introduced participants to high-impact fields like Agentic AI, Computer Vision, Satellite Communication, and Nanotechnology, broadening their technological horizons and awareness of interdisciplinary applications.
3. **Practical Insights and Real-World Applications**
   Sessions led by esteemed professionals from academia, ISRO, and tech industries provided participants with expert knowledge, current advancements, and a deeper understanding of real-world challenges and solutions.
4. **Career Advancement and Skill Development**
   Participants explored real-world use cases, helping them understand the practical implementation of theoretical concepts, while bridging the gap between classroom learning and industry demands.

KPIs

We are pleased to share with our esteemed readers a collection of standout moments and significant achievements that played a crucial role in making the event a great success.

200
Total entries recorded

480 Minutes
Scheduled Time

5
Number of Experts

Aryabhata Auditorium
Silver Oak University

11th July 2025
09:30 A.M. - 05:30 P.M.

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Introduction

AI Conclave 2.0 was organised at **Silver Oak University** by **IEEE Signal Processing Society Gujarat Chapter**, **Silver Oak University IEEE Student Branch**, **Silver Oak University IEEE Signal Processing Society Student Branch Chapter** and **Google Developer Groups on Campus Silver Oak University**. Serving as the sequel to the **AI Conclave - Ahmedabad 2024**, this edition expanded its vision with broader themes, deeper discussions and stronger foundations.

This conclave aimed to bring together students, researchers and professionals to engage with the latest developments in AI. The event focused on key areas such as Signal Processing, Machine Learning, Computer Vision, Agentic AI, Satellite Communication and Nanotechnology. It was designed to encourage interdisciplinary dialogue, hands-on learning and provide a platform for forward-thinking ideas that push the boundaries of what AI can achieve.

About Experts

Dr. Maitrik Shah

Asst. Prof., L.D. College of Engineering
Best Paper Awardee, IEEE InGARSS

Mr. Harshal Trivedi

Chief AI Officer, Sahana System Ltd.
Founder & CEO, Tusker AI
Founder, Softvan Pvt. Ltd.

Mr. Gowrav Vishwakarma

Chief Technology Officer, Ankpal

Dr. Deepak Mishra

Head, SatNav, Payload Electronics Division, ISRO

Dr. Rutu Parekh

Asst. Professor, DA-IICT
Vice Chair, Nanotechnology Council Chapter, IEEE Gujarat Section

Inauguration

AI Conclave 2.0 began on an inspiring note, bringing together students, faculty and respected dignitaries for a memorable inauguration. The ceremony opened with an auspicious ritual of Deep Pragatya and Saraswati Vandana, setting a graceful tone for the day. Lamp lighting was conducted by respected dignitaries including Dr. M. N. Patel, Dr. Satvik Khara, Dr. Pooja Shah, Dr. Maitrik Shah and Prof. Mayuresh Kulkarni, marking formal commencement of the conclave.

Dr. M. N. Patel addressed audience with words of encouragement, highlighting the significance of AI in today's rapidly evolving world and responsibility of academic institutions in nurturing future-ready talent. His insights brought a thoughtful perspective into gathering as well as emphasised the importance of initiatives like AI Conclave.

Following his address, Dr. Pooja Shah also shared her appreciation of the event's scale and spirit. She commended the organising team for their attention to detail, smooth coordination and the impressive scale at which it was executed. Her words reinforced collective effort and planning that went into making of AI Conclave 2.0.

Glimpses of Inauguration

The event commencing with curators addressing the audience and setting tone for the conclave

Traditional Deep Pragatya being performed by esteemed dignitaries to mark an auspicious beginning

Dr. M.N. Patel addressing the audience, emphasising the significance of technological growth in current era

Dr. Pooja Shah expressing her appreciation for the initiative and efforts behind AI Conclave 2.0

SESSION 1

Dr. Maitrik Shah

Machine Learning Meets Signal Processing: Understanding the 'Learning' in ML

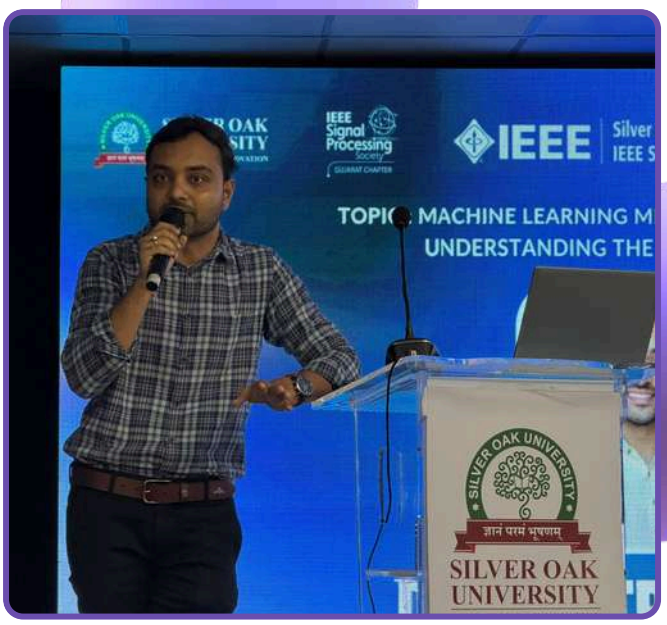
AI Conclave 2.0 opened with a powerful keynote by Dr. Maitrik Shah, setting an inspiring tone and establishing a strong intellectual foundation for a day of deep exploration into the evolving landscape of AI. With his deep expertise and instructional approach, he introduced core concepts of Signal Processing and Machine Learning to the audience. Rather than diving straight into heavy technical details, he first established a contextual understanding, helping students appreciate how these technologies are relevant in real-world scenarios. Through relatable examples, he demonstrated how signal processing plays a crucial role in applications such as satellite imaging and remote sensing, allowing participants to connect theoretical knowledge with practical impact.

Proceeding ahead, he moved into the domain of machine learning, highlighting its pivotal role in today's intelligent systems. Without overwhelming the participants, he walked them through how machines learn from data and differs from traditional hard computing methods. He ensured that his structured outline provided participants with an integrated understanding of how intelligent systems are developed and optimised.

The session concluded with a brief interactive discussion, where Dr. Maitrik Shah responded to questions from the audience ranging from FSO technologies to next-generation infrastructures like 5G and 6G. His closing remarks offered a forward-looking perspective, leaving participants with valuable insights into the future of satellite communication. As a token of gratitude, Dr. Satvik Khara presented a memento to Dr. Maitrik Shah, in recognition of the insightful contributions and enriching perspectives he shared.

Glimpses of SESSION 1

Dr. Maitrik Shah opening the keynote session, setting the momentum for the day's proceedings



Speaker breaking down complex ideas for attendees during the ongoing session

Audience gaining insights as the expert is decoding the 'learning' aspect of ML in real-world contexts

Dr. Satvik Khara presenting a memento to Dr. Maitrik Shah as a token of gratitude for his valuable insights

SESSION 2

Mr. Harshal Trivedi

Computer Vision & The Concept of No-Code Platforms

Building upon the foundation of opening session, the second session was led by Mr. Harshal Trivedi, whose vibrant and interactive style energised participants from the beginning. He took the stage with a candid and spontaneous approach, departing from typical formats and establishing an authentic connection with attendees.

He captivated audience with his fresh take on transformation occurring within technological sphere. By referencing practical industry scenarios, he emphasised how staying attuned to industry trends and being open to continuous learning can pave the way for new opportunities. This sparked a powerful message that success in tech world is no longer limited to traditional technical expertise but is increasingly driven by adaptability, strategic thinking and the ability to understand market demands.

This segment sparked an interactive and meaningful discussion, with attendees expressing concerns about future job prospects amid the growing adoption of no-code platforms and their expanding role in technology-driven industries. In response, expert highlighted the value of cultivating a solution-oriented mindset and developing a strong understanding of industry expectations that extend beyond technical expertise. Session concluded with a heartfelt gesture of gratitude by Prof. Parimal Patel, who honored Mr. Harshal Trivedi for his thought-provoking and refreshingly unconventional contribution to AI Conclave 2.0.

Glimpses of SESSION 2

Mr. Harshal Trivedi beginning the session, addressing participants with high energy

Participants attentively understanding the concepts of computer vision and it's application

Expert explaining the concept and functionality of no-code platforms to the participants.

Session concluding with Prof. Parimal Patel felicitating Mr. Harshal Trivedi for his contribution in the event

SESSION 3

Mr. Gowrav Vishwakarma

Fundamentals of Agentic AI

Keeping the momentum alive, the third session of this forum was led by Mr. Gowrav Vishwakarma, who captivated audience's attention with a high-energy segment on Agentic AI. Through clear demonstrations and relatable examples, he traced AI's evolution from simple rule-based systems to intelligent agents capable of thinking and acting independently. Revisiting a key shift in 2014, he explained how this transformation laid the groundwork for AI systems that behave more like human assistants.

Rather than focusing on theory alone, Mr. Gowrav took a hands-on approach. He demonstrated how AI agents are built from scratch, guiding participants through live development using extensions like Cortex and Agent Tools. His engaging demos showed how these agents can interpret commands, learn from past interactions and continuously improve performance. Alongside practical prospects, he shed light on instruction tuning and prompt engineering in an intuitive as well as accessible manner, making technical ideas easy to grasp for the attendees.

Excitement in the auditorium was evident, with participants eagerly engaging and posing thoughtful questions. Mr. Vishwakarma's practical approach and interactive delivery made learning both enjoyable and impactful. To conclude this session, Prof. Gaurav Tiwari presented a memento to Mr. Gowrav Vishwakarma, expressing gratitude for his valuable insights and hands-on exposure he provided.

Glimpses of SESSION 3

Mr. Gowrav Vishwakarma kicking off the third session with engaging the audience right away

The session progressing with Gowrav Vishwakarma demonstrating how AI agents are built

Expert addressing a participant's query during the hands-on session

Mr. Gowrav Vishwakarma receiving a memento from Prof. Gaurav Tiwari as a mark of gratitude and respect

SESSION 4

Dr. Deepak Mishra

Quantum Communication in Satellite Communications

Shifting the spotlight from artificial intelligence to a realm of advanced communication technologies, a compelling expert session was delivered by Dr. Deepak Mishra, who introduced attendees to groundbreaking developments in quantum communication within satellite systems. Beginning with a brief self-introduction, Dr. Deepak Mishra offered a compelling overview of India's current satellite communication landscape. He explained how fusion of quantum technology and optical systems is transforming high-speed data with security, introducing participants to the fascinating world of secure quantum communication.

Discussion sparked curiosity among attendees, leading to an engaging Q&A where participants asked about India's global standings, roles of satellites in securing data transmission and the potential impact of these technologies on everyday communication. Dr. Mishra also outlined how countries like China and Japan are advancing in this space, reflecting the growing global interest in secure and high-speed communication.

This session culminated in an engaging discussion on the role of technologies like free-space optical communication and quantum systems in shaping next-generation infrastructure for 5G and 6G. Dr. Mishra addressed challenges of integrating quantum capabilities into satellite networks, particularly in terms of security, speed and scalability. To commemorate the session, Dr. Satvik Khara presented a token of gratitude to Dr. Deepak Mishra in recognition of his valuable insights and thought-provoking talk on the future of global communication.

Glimpses of SESSION 4

Dr. Deepak Mishra opening the fourth session with an insightful introduction

Expert outlining the key themes and objectives of the session for participants

Session continuing as the speaker highlights emerging developments in satellite communication technology.

Dr. Deepak Mishra being honoured with a token of gratitude by Dr. Satvik Khara

SESSION 5

Dr. Rutu Parekh

Signal Processing in Nanotechnology

To mark the conclusion of AI Conclave 2.0, an insightful session was led by Dr. Rutu Parekh, highlighting fascinating intersections of signal processing and nanotechnology. It opened with an exploration of how nature seamlessly blends with principles of nanotechnology, equipping attendees with a new set of vision to explore world around them. Later on, the discussion delved into the history of nanotechnology, painting a vivid picture for attendees to appreciate its evolution and envision its limitless future potential.

Dr. Rutu Parekh then elevated the talk on nanotechnology to a new level, highlighting its immense potential across diverse fields such as aerospace, agriculture, biotechnology and defense, emphasising on how molecular-level engineering holds power to revolutionise complex systems. Alongside promising prospects, Dr. Parekh also shed light on the key challenges that arise at the nanoscale ranging from measurement to limitations of traditional models.

The conclave came to a close with a thought-provoking Q&A between Dr. Rutu Parekh and the attendees. This engaging discussion addressed a wide range of questions, from imaginative concepts of developing an Iron Man suit to scientific potentials of precisely arranging molecules through computer control. It ensured that all curiosities were addressed, leaving participants both inspired and informed. To commemorate, Dr. Sanket Shah presented a memento to Dr. Rutu Parekh in appreciation of her insightful and visionary presentation.

Glimpses of SESSION 5

Dr. Rutu Parekh commencing the final session with an introductory address to the attendees

Speaker providing an overview of nanotechnology and its ongoing developments

Attendees exploring the convergence of signal processing and nanotech through real-world applications

Prof. Sanket Shah offering a token of gratitude to Dr. Rutu Parekh for her insightful session

CONCLUSION

AI Conclave 2.0 concluded on a high note, leaving attendees enriched with knowledge, inspiration and a renewed curiosity for the future of technology. Across five dynamic sessions, participants engaged with distinguished speakers who bridged foundational concepts and cutting-edge innovations, from signal processing and machine learning to quantum communication and nanotechnology. The blend of hands-on activities, interactive discussions, and industry insights ensured that it was not just informative but deeply thought provoking. Each session built upon the last, promoting a sense of continuity and growth that allowed students and professionals alike to envision their role in shaping next wave of intelligent systems.

The conclave successfully created a space for learning, collaboration and imagination, encouraging participants to think beyond conventional boundaries and embrace emerging possibilities. Whether it was decoding AI agents, exploring no-code platforms, or imagining the possibilities of rearranging matter, every interaction sparked ideas worth carrying forward. As the curtains fell, what remained was a vibrant echo of ideas, inspiration, and spirit of inquiry. With hearts full of gratitude and minds ignited, this conference drew to a close, setting stage for many more such milestones ahead.

The success of this event was made possible under the guidance and support of Dr. Satvik Khara, Dean, College of Technology, Silver Oak University; IEEE Senior Member; Chairperson, Technical Activity, Computer Society, IEEE Gujarat Section; Founding Member, Silver Oak University IEEE Student Branch; Chapter Director, Google Developer Groups on Campus Silver Oak University. His visionary leadership and unwavering support played a pivotal role in the success of the event, fostering an environment of learning and innovation.

Attendees Report

NUMBER OF ATTENDEES

Non-IEEE Student Members = 144

IEEE Student Members = 56

Volunteer Credits

Creative Team
Aarushi Mishra
Mrigakshi Roy
Dhyani Modi
Falak Thacker
Ananya Sharma
Rishi Amrutiya
Siya Aacharya
Digveejay Rajpurohit
Mayuri Raghvani
Dhruv Chavda
Tanuj Bhatt
Payal Rana
Sujal Patel
Mahesh Khandla
Aarchee Kalsariya
Jayrut Gajjar
Deshna Shah

Content Team
Nirmal Menat
Khushi Desai
Surabhi Rana
Aarushi Mishra
Vansh Vyas
Khushi Sharma
Riffat Khan
Jay Mahida
Abhishek Agarwal
Sakshi Soni
Trisha Patel
Avni Mahajan
Rushi Joshi
Palak Joshi
Harshita Pawar
Mayuri Raghvani
Aaryan Vegda
Dhyani Modi
Falak Thacker
Prayas Chavda
Maruf Fatema Mansuri
Deeksha Kumari
Dhruv Chavda
Kartik Vegad
Deshna Shah
Vedant Agrawal
Vivek Kumar
Aarchee Kalsariya
Atharv Ambekar
Rishita Prajapti
Vraj Thakkar
Nisarg Chauhan

Curation Team
Dhyani Modi
Deeksha Kumari
Maruf Fatema Mansuri
Kashish Kharwar
Falak Thacker
Siya Acharya
Sayee Salokhe
Aaryan Vegda
Mayuri Raghvani
Anurag Soliya
Sujal Patel
Rajat Aswani
Zalak Rajvanshi
Nisarg Chauhan
Aarchee Kalsariya
Vedant Agrawal
Yagnesh Bhavsar
Rishita Prajapati
Atharv Ambekar

Technical Team
Pujan Jani
Sunil Parmar
Vansh Vyas
Meet Thummar
Tarang Prajapati
Shaikh sadaf
Dipak Lonkar
Jyotir Joshi
Divyansh Rawal
Deep Khatri
Rajat Aswani
Setu Madhavani

Outreach Team
Tarang Prajapati
Jaimin Patel
Sadaf Shaikh
Devanshi joshi
Tasneem Hasan
Payal Rana
Radheyshree Vyas
Aakash Vishwakarma
Palak Joshi
Kairav Prajapati
Vansh Vyas
Prince Patel
Dhyey Damor

Volunteer Credits

Aayushi Jivani
Aastha Valani
Manali Tala
Navya Shah
Rajpurohit Digveejay
Meet Shastri
Kashish Kharwar
Jeel Patel
Rishi Amrutiya
Manthan Davra
Mayuri Raghavani
Deeksha Kumari
Dhyani Modi
Divyansh Rawal
Aaryan Vegda
Maruf Fatema Mansuri
Deep Khatri
Jyotir Joshi
Yagnesh Bhavsar
Kartik Vegad
Jayani Nathvani
Nisarg Chauhan
Atharv Ambekar
Tanuj Bhatt
Setu Madhvani
Anurag Soliya
Vraj Thakkar
Mahesh Khandala
Ravina Gajipara
Aarchee Kalasariya
Zalak Rajvanshi
Deshna Shah
Sujal Patel
Frenny Chothani

Managment Team

Smit Thakkar
Sabalpara prince Vijaybhai
Rushi Joshi
Jaimin Patel
Harshvardhan Solanki
Pujan Jani
Ankit Kumar
Abhishek Agarwal
Khushi sharma
Radheyshree Vyas
Management Nehit
Bhesaniya
Parmar preeti
Riya Soni
Sunil Parmar
Prajapati Tarang
Ashish Masih
Vansh Vyas
Meet Thummar
Riffat Khan
Vanshika Movadiya
Palak Joshi
Tasneem hasan
Devanshi Joshi
Akash Chandravanshi
Ayushkumar Giri
Kathan Dalwadi
Ruchit Adroja
Sankesh Prajapati
Rishi Amrutiya
Patel Jeel
Manthan Davra
Hiya Solanki
Tanuj Bhatt
Payal Rana
Suajal Patel
Frenny Chothani
Mahesh Khandla

Photography Team

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Jayrut Gajjar
Atharv Ambekar