SILVER OAK UNIVERSITY
EDUCATION TO INNOVATION

IEEE | Silver Oak University IEEE Student Branch

IEEE Signal Processing Society

IEEE Signal Processing Society GUJARAT CHAPTER

IEEE Signal Processing Society CELEBRATING 75 YEARS

AT A GLANCE

The Event was all about the exposure of current trends of technology in Machine Learning Enabled Blockchain. In this series of 5 Days workshop the participants learned how to automate the tasks in blockchain technology such as contract writing, automation in web3 etc.

KPIs

For our esteemed readers we share some salient details and Key Performances that made the most impact in the event's success.

117
Total entries recorded

23 HOURS
Scheduled Hours

9/10
Average Feedback assessed

7
Number of Experts

MILLENNIUM HALL
Silver Oak University

15th - 20th FEBRUARY 2023
10:00 AM - 04:00 PM

SEASONAL SCHOOL

The main objective of the Seasonal school is to provide a platform to create awareness on recent developments in Signal Processing and its applications to the latest technological developments.

ABOUT MACHINE LEARNING ENABLED BLOCKCHAIN

This Seasonal School on Machine Learning Enabled Blockchain focuses on the intersection of Blockchain Technology and Machine Learning. It brought a wonderful opportunity for participants to learn from field experts and gain a deeper understanding on how these technologies can be used to create unique identities on the blockchain with the use of historical data and machine learning techniques. This five-day workshop format provided ample time for in-depth exploration and discussion of the topics.

MACHINE LEARNING

BLOCKCHAIN

WEB 3.0

BENEFITS

1

Benefit One

This event provided an insightful opportunity to the students to learn and gain expertise from the field expert of machine learning and blockchain technology.

2

Benefit Two

The five-day workshop furnished and provided great Hands-on experience to all the attendees.

3

Benefit Three

Insights on latest trends in Machine Learning and Blockchain Technology with industrial aspects.

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About Event

The Event was all about the exposure of current trends of technology, **Machine Learning Enabled Blockchain**. In this series of 5 Days workshop the participants learned how to automate the tasks in Blockchain Technology such as contract writing, automation in web3, etc.

The name of this Seasonal School itself curates its importance and meaning in this fast-growing technical world. This tremendous 5 days' workshop included industrial experts and researchers working in the domain of Machine Learning & Blockchain Technology. This Seasonal School on Machine Learning Enabled Blockchain focused on the intersection of Blockchain Technology and Machine Learning. It brought a wonderful opportunity for participants to learn from field experts and gain a deeper understanding on how these technologies can be used to create unique identities on the blockchain with the use of historical data and machine learning techniques. This five-day workshop format provided ample time for in-depth exploration and discussion of the topics.

Report - Day 1

15th February, 2023

A gathering of all the respected dignitaries:

Dr. Jay Dave
Associate Professor, Department of Computer Engineering, SOCET.

Prof. Jaimin Dave
Vice Principal, Silver Oak College of Engineering and Technology.

Dr. Manish Khare
Assistant Professor at Dhirubhai Ambani Institute of Information and Communication Technology.

Dr. Pina Bhatt
Deputy Vice Chancellor, Silver Oak University.

Dr. Satvik Khara
Dean, Diploma Engineering, SOU
Head, Department of Computer Engineering, SOCET
Founding Member, Silver Oak University IEEE Student Branch
Chair, SIGHT, IEEE Gujarat Section
Secretary, Computer Society, IEEE Gujarat Section

Mr. Harshal Trivedi
Founder, Tusker AI & Softvan

Session 1

On 15th February 2023, The Silver Oak University IEEE Signal Processing Society Student Branch Chapter organized a 5-day event on IEEE SPS Seasonal School on Machine Learning Enabled Blockchain.

On the first day, the event started at 10:00 AM with the arrival of the guest **Dr. Manish Khare**, *Membership Development Chair, and Assistant Professor at DAIICT*; and the top management of Silver Oak University, **Dr. Pina Bhatt**, *Deputy Vice Chancellor, Silver Oak University*; **Prof. Jaimin Dave**, *Vice Principal, Silver Oak University*; **Dr. Satvik Khara**, *Dean, Diploma Engineering, SOU; Head, Department of Computer Engineering, SOCET; Founding Member, Silver Oak University IEEE Student Branch; Chair, SIGHT, IEEE Gujarat Section; Secretary, Computer Society, IEEE Gujarat Section;* ***Dr. Jay Dave,*** *Associate Professor, Department of Computer Engineering, SOCET* and **Mr. Harshal Trivedi**, *Founder and CEO of TuskarAI.* Dr. Manish Khare sir was asked to unveil the Seasonal School and then share his wise words where he recounted all the participants with various features and benefits of becoming a member of the IEEE and Signal Processing Society. Furthermore, Mr. Harsal Trivedi sir commenced the first session of the day, leading the audience through the economics and environment of working in companies. He provided many insights on the beginnings of startups and their management in different phrases. He then moved forward to explaining the importance of ML and AI and its growing need and requirement. He informed students about various reasons they should choose to work in the AI field. Running through different details about the emerging technologies from the last decade, he explained the increasing use of AI in numerous MNCs and its trend. He then moved on to the domain of Machine Learning. He introduced the students to the latest No Code technology and showcased a demo on Tusker AI, giving a description about its features and functions. The session concluded at 01:00 PM where Mr. Digant Parmar presented the speaker with a memento and the members began with Lunch Break.

Report - Day 1

15th February, 2023

Expert speaker for Day 1, Session 2 and the Founder of Silver Oak University IEEE Student Branch.

Dr. Raviraj Vaghela
Assistant Professor, FoCA
Department, Marwadi University

Dr. Satvik Khara
Dean, Diploma Engineering, SOU
Head, Department of Computer Engineering, SOCET
Founding Member, Silver Oak University IEEE Student Branch
Chair, SIGHT, IEEE Gujarat Section
Secretary, Computer Society, IEEE Gujarat Section

Session 2

Moving forward to the second session which commenced at 02:00 PM, the speaker Mr. Raviraj Vaghela, Assistant Professor, Department of FoCA, Marwadi University was bestowed with a memento by Dr. Satvik Khara sir and was further requested to begin his session. Mr. Raviraj Vaghela started with a basic introduction to Blockchain and its respective use in cryptocurrency.

Mentioning its advantages and applications, he progressed on to describing the challenges one faces while working with technology. Moving forward, he deep-dived into the work and request cycles of the components of Blockchain. The lecture advanced with several designs and testing methods and how the use of the Hyperledger Fabric model can help with better implementation of the technology. On an endnote, he instructed the participants about the deployment process of the ML models. The session ended at 04:00 PM with the participants obtaining many insights into the topics.

Day 1 Session 1

Dr. Pina Bhatt, Deputy Vice Chancellor, Silver Oak University proferring a heartfelt bouquet to the chief guest Mr. Manish Khare, Assistant Professor at Dhirubhai Ambani Institute of Information and Communication Technology.

Prof. Jaimin Dave, Vice Principal, Silver Oak College of Engineering and Technology proferring a heartfelt bouquet to the esteemed speaker Mr. Harshal Trivedi, Founder, Tusker AI & Softvan.

A glimpse of the inauguration ceremony of the event with all the dignitaries.

Session of Mr. Harshal Trivedi on Fundamentals Of Machine Learning.

Day 1 Session 2

A glimpse of Second Session by Dr. Raviraj Vaghela on Blockchain Performance Testing.

The expert explaining the topics of Blockchain Performance Testing.

Mr. Ravirag Vaghela interacting with the attendees.

A group photo with all the attendees, dignitaries and expert speaker.

Report - Day 2

16th February, 2023

A gathering of the respected dignitaries and the day's expert:

Mr. Ashish Patel
AI Research Scientist &
Chief Data Scientist, IBM

Dr. Jay Dave
Associate Professor, Department of Computer Engineering, SOCET.

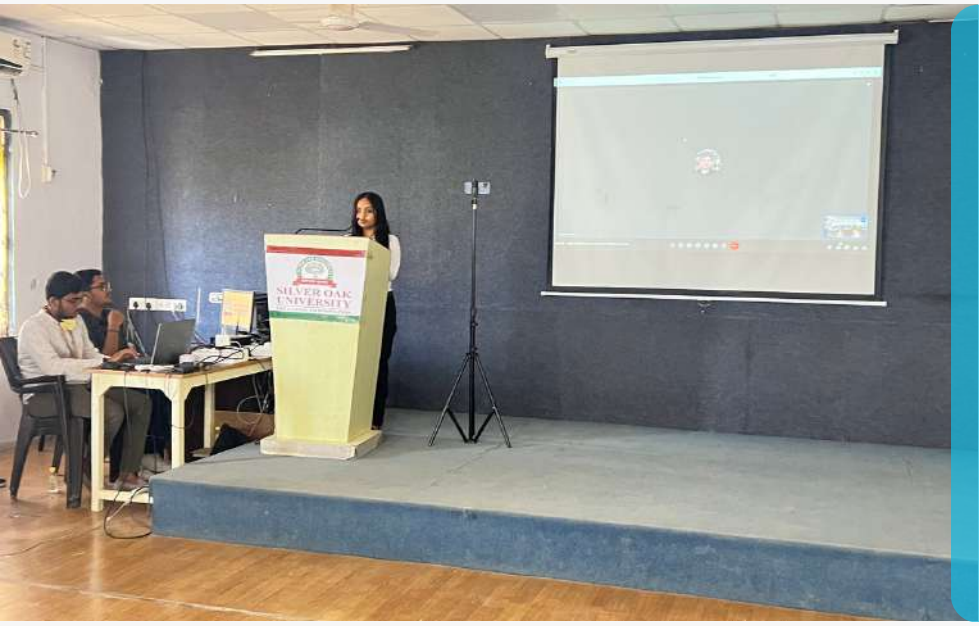
Prof. Digant Parmar
Assistant Professor, Department of Computer Engineering, SOCET.

Session 1

The participants were pumped up on the second day to get the hang of machine learning and blockchain through the event. The renowned speaker for the day was Mr. Ashish Patel, a leading Artificial Intelligence Researcher, and Chief Data Scientist at IBM. Mr. Ashish Patel sir was felicitated by Prof. Mayuresh Kulkarni sir with a bouquet and then onwards the stage was handed over to the speaker. The speaker initiated by explaining how Timeseries Analysis is an essential part of Machine Learning. Furthermore, he explained how changes according to time can affect the analysis done through it. Also, a few types of techniques were explained for the same. In addition to this, the explanation was more linked with real-life examples i.e. as the stock market changes every second, the same goes with time analysis. In the end, a short Q&A session was done to clear the doubts of the participants.

Report - Day 2

16th February, 2023



A glance at the anchoring of the online session by Dr. Sharnil Pandya, Researcher & IOT Trainer, Linnaeus University, Sweden being introduced to the participants.

Session 2

Later, there was a lunch break which was then resumed by our next speaker, **Dr. Sharnil Pandya**, *Researcher at Linnaeus University, Sweden, and an IBM Certified IOT trainer*. This was an online session, but the participants gave appropriate attention to the online speaker, as he kept on engaging the participants with a few questions. The speaker gave detailed insights into Machine Learning and Blockchain. Also, real-life implementations of ML were introduced to the participants. Moreover, the techniques showed the combination of IOT and ML. Through this event, all attendees got to learn about how there is a need of IOT for analysis. Lastly, there was a quick glance at different projects of IOT in collaboration with ML. After the session, the speaker was rewarded with an E - Memento as a token of gratitude.

Day 2 Session 1

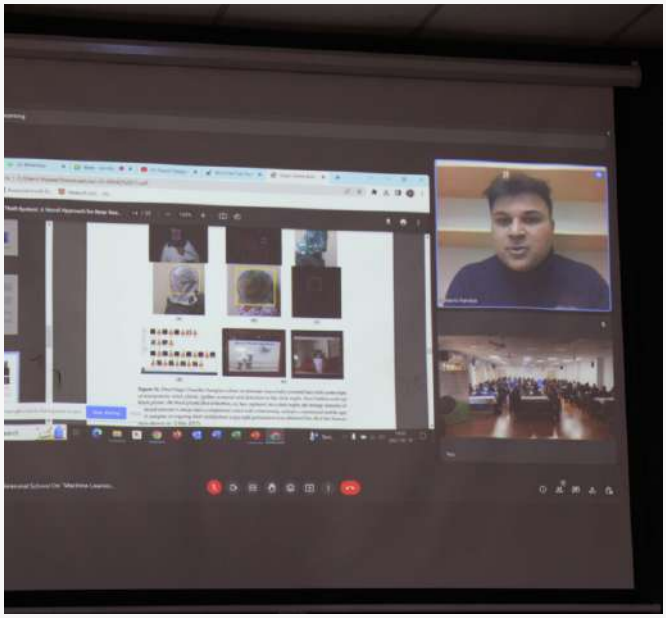
Mr. Ashish Patel, the expert for the session being felicitated by Prof. Mayuresh Kulkarni, Branch Counsellor of IEEE SOU SB.

The dais of dignitaries Dr. Jay Dave & Prof. Digant Parmar with the expert Mr. Ashish Patel.

Mr. Ashish Patel explaining his topics of '**Case Study of Timeseries**'.

The expert Mr. Ashish Patel interacting with the attendees.

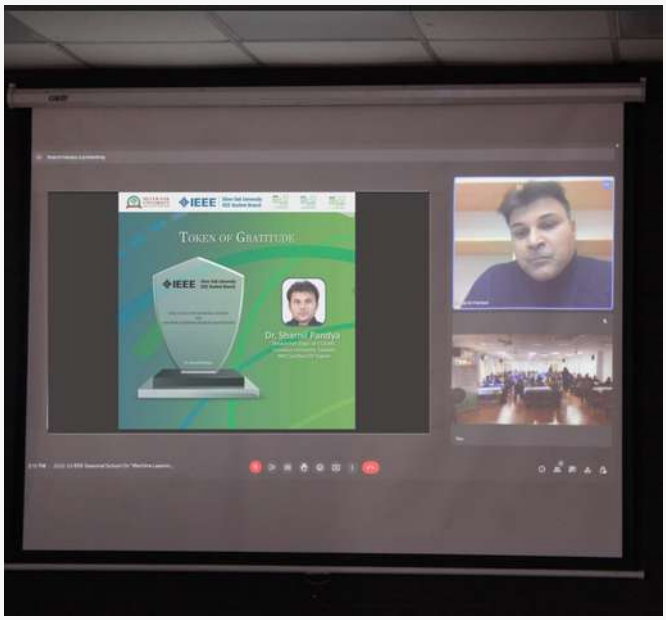
Day 2 Session 2



Online session of Dr. Sharnil Pandya, Researcher & IOT Trainer, Linnaeus University, Sweden.

Students asking their doubts in relation to the explained topics of AI enabled Health Informatics, IOT and Case study.

A glance of all the attendees learning the explained topics.



Dr. Sharnil Pandya being felicitated by an E-Memento as a token of gratitude.

Report - Day 3

17th February, 2023

A gathering of all the respected dignitaries and expert on the dais:

Dr. Jay Dave
Associate Professor, Department of Computer Engineering, SOCET.

Mr. Bhargav Patel
AI Engineer,
Detect Technologies

Prof. Parimal Patel
Professor, Department of Computer Engineering, SOCET.

Session 1

Maintaining the enthusiasm from previous sessions, Mr. Bhargav Patel was invited as the speaker, the students were also inquisitive, prior to his arrival. With the help of a real-world example, he explained how Blockchain and AI could be used. A noteworthy thing was the PPT which the expert created to explain the topics. A key component of Blockchain is MLOps, which combines machine learning with software engineering. Since Software Engineering is one of the essential elements to build MLOps he explained to us that topic in detail. He then discussed the drawbacks of Machine Learning which was the scalability issue. Next, he discussed scalability as a drawback of machine learning and to solve this issue they created MLOps which is used to make models more scalable and fairer. Next, we discussed Pipeline, which he demonstrated by using APIs. To build this software he showed us three different tools which are Docker, TFX, and AirFlow.

Report - Day 3

17th February, 2023

The day's speaker Mr. Bhargav Patel, AI Engineer, Detect Technologies explaining his topics of MLOps using Tensorflow and providing Hands-on experience on MLOps using TFX.

Session 2

After a knowledgeable first session, we moved forward to the second session which included the practical session. The audience was very cheerful and excited about the hands-on session. After that, he introduced us to the acronym TOML (Tom's Obvious, Minimal Language). He directed us to install the anaconda navigator, Docker, and the specific version of Python which was required for practical. After giving the commands to run the data he then cleared the doubts of the students.

Day 3 Session 1 & 2

A glimpse of Mr. Bhargav Patel's session on MLOps using Tensorflow.

Participants being interactive with the speaker by asking their doubts.

A glance of the second session of the expert providing Hands-on experience to all the attendees.

Mr. Bhargav Patel being felicitated by Prof. Parimal Patel with a memento as a token of gratitude.

Report - Day 4

18th February, 2023

The day's expert Dr. Sudeep Tanwar, IEEE GS Computer Society, Vice-chair; Advisor, CoE-Blockchain Technology, Govt. of Guj. being felicitated by Prof. Mayuresh Kulkarni, Branch Counsellor at Silver Oak University IEEE Student Branch.

Session 1

Gathering on the fourth day of the Seasonal School on Machine Learning Enabled Blockchain, the keynote speaker Dr. Sudeep Talwar, Professor, UG Research and PG Coordinator, SMIEEE, LMISTE, ACM, Advisor, CoE-Blockchain Technology by Government of Gujarat, Vice Chair-IEEE at Computer Society Chapter arrived at the venue with other respected dignitaries Dr. Jay Dave sir and Prof. Mayuresh Kulkarni sir. Dr. Jay Dave sir welcomed him with a bouquet. He then commenced his session by introducing the audience to his niche topic, Fundamentals of Blockchain. He explained blockchain basics by giving the crowd an example of how traditional ways of sharing data are changing, making a point to mention the drawbacks of the current technology. While coining the peer-to-peer concept, he took a moment to distinguish terms like decentralized, distributed, and centralized blockchain. His view of the blockchain as an add-on rather than a replacement was quite an eye-opener to many. His shared insights on the flaws of blockchain and the reasons why it is yet to be legalized while also contradicting how it would be used in the future seemed to bring the situation to a new light. Mentioning erudite explanations on topics such as Hash, Mining, Cryptocurrency, Smart contract, and much more in an uncomplicated way, he made the participants much more susceptible to the session. With ease, he opened the participants to more in-depth concepts of how Cryptocurrency works and also eradicated a popular misconception of how individuals think Blockchain and Cryptocurrency / NFT are the same things. The session ended with curious participants eagerly grilling him with doubts and his quick and precise solutions to those problems. Concluding the session, Prof. Mayuresh Kulkarni sir proffered a memento to Dr. Sudeep Tanwar for conducting an interactive and insightful session.

Day 4 Session 1

Session of Dr. Sudeep Tanwar on Recent trends in Blockchain Technology.

Dr. Sudeep Tanwar sharing his contributions in the field of Blockchain Technology.

Participants being interactive with the expert and clearing their doubts on the topic.

Group photo at the end of the session with all the attendees, dignitaries & expert.

Report - Day 5

20th February, 2023

A gathering of all the respected dignitaries:

Prof. Parimal Patel
Professor, Department of Computer Engineering, SOCET.

Dr. Jay Dave
Associate Professor, Department of Computer Engineering, SOCET.

Dr. Ashish Parejiya
Director of Technology, DBC-PIRAMAL

Prof. Digant Parmar
Assistant Professor, Department of Computer Engineering, SOCET.

Session 1

On 20th February, IEEE Silver Oak University Student Branch commenced with the fifth and final day of Seasonal School on Machine Learning - Enabled Blockchain. The honorable guest Dr. Ashish Parejiya sir and the dignitaries, Mr. Digant Parmar sir and Mr. Parimal Patel sir, arrived at the venue at 10:20 am. Commencing the event, an introductory speech took place following which Digant Parmar sir welcomed the day's speaker Dr. Ashish Parejiya with a bouquet. Thereafter, the dignitaries were requested to take their respective seats in the audience and the speaker instigated his session on Web 3.0 Architecture and its related Microservices. The speaker began by making basic introductions about Data Analytics and went on to explain the past trends and figures. Furthermore, he explained Data analysis with business skills and the existing use cases in various government bodies. Additionally, he informed the participants about Data Analytics applications in various fields mentioning the top businesses using them in the industry. Concluding the topic by detailing the Data Science life cycle and models, he moved on toward Web3.0 Microservice architecture and the need for a shift from the current technology to Web3.0. Then, he communicated with enthusiastic students about the contrasts between Monolithic and Microservice architecture, backing his points with several real-life case studies. The next few minutes were spent discussing Microservices Programming as well as explaining the Data visualization. On an end note, he gave a brief overview of the data exchange application context and completed an interactive session in which students eagerly participated with keen questioning. The session came to end with Dr. Satvik Khara sir honoring him with a memento and showing his appreciation for sharing his knowledge with the participants.

Day 5 Session 1

Dr. Ashish Parejiya being greeted by Dr. Jay Dave with a heartfelt bouquet.

Dr. Ashish Parejiya explaining his topic of Data Science Analytics and Web 3.0 Microservices Architecture

Dr. Ashish Parejiya accumulating feedbacks on the event.

The expert Dr. Ashish Parejiya being felicitated by Dr. Satvik Khara sir as a token of gratitude.

Conclusion

The event 2022-23 IEEE SPS Seasonal School on Machine Learning Enabled Blockchain showcased tremendous success. The speakers provided incredible insights about the potential of **Machine Learning** & **Blockchain Technology** and how it can revolutionize various industries.

The event was joyfully attended by the participants. The discussions were lively and thought-provoking, and attendees left with a better understanding of the potential of Machine Learning and Blockchain Technology.

We believe this is just the beginning of what this technology can do, and we are excited to see how it will continue to evolve in the coming years. This event has inspired attendees to continue exploring the potential of Machine Learning and Blockchain Technology.

Attendees Report

NUMBER OF ATTENDEES BY CATEGORY

Students / Research Scholar Student:

1. Non-Member Student / Research Scholar Student = 63
2. IEEE Student Member = 1
3. SPS Student Member = 53

Professional / Research Scholar Professional:

1. Non-Member / Research Scholar = 0
2. IEEE Member = 0
3. SPS Member = 0
4. IEEE Life Member = 0

Feedback Summary

This section contains the feedback asked as per the **SPS Membership Event Organizer Guideline**, provided by SPS. The quotes in this report are extracted from the feedback forms that the participants were asked to fill out and submit to the organizers at the end of the event.

OVERALL, HOW SATISFIED PARTICIPANTS WERE WITH THIS EVENT?

Overall, the coordination and arrangements of the event were highly appreciated by the participants. The purpose, results, and outcomes were regarded as relevant and meaningful. Considering the overall feedback from the participants, they were moderately satisfied with the event.

WERE THE PARTICIPANTS INTERESTED IN ATTENDING A FOLLOW-UP EVENT NEXT YEAR ON A RELATED TOPIC?

Participants appreciated and showed their utmost interest in the follow-up event next year on a related topic.

WHAT WERE THE COUNT OF IEEE & SPS MEMBERS ATTENDNG THE EVENT?

The responses from the Registration showed that the count of IEEE Members was 54 and the count of Guests who attended was 63. Along with that, the Feedback responses showed that the count of IEEE Members was 24 and the count of Guests who attended was 32. The SPS Member count in the Feedback responses consisted of 21 SPS Members and 35 as either Guest or IEEE but not SPS members.

COUNT OF MEMBERS WHO BECAME AN IEEE SIGNAL PROCESSING SOCIETY MEMBER WHEN THEY REGISTERED FOR THE EVENT & COUNT OF MEMBER BEFORE THEY DECIDED TO ATTEND THE EVENT?

The count of members who became IEEE Signal Processing Society members when they registered for the event was 34 & the count of members before they decided to attend the event was 22.

Feedback Summary

SOME RESPONSES OF WHAT THE PARTICIPANTS LIKED ABOUT THIS EVENT.

The participants appreciated the interactive set up of the conference where everyone has a role to play. Both participants and organizers considered the sessions much valuable concerning the aspect of the event format.

Some responses from the participants are mentioned below for reference.

1. It was very insightful and the knowledge shared was exceptional.
2. Arrange more events like that.
3. Interactive Sessions.
4. Management and speaker and such knowledgeable atmosphere.
5. Intellectual and knowledgeable event.
6. I have learnt and explore more about ML and Blockchain. And meeting new students with same mindset.
7. This event was very deep and clear knowledge about new upcoming technologies.
8. First of all, obviously the knowledge of the speaker's and also another important thing is food. It was also tasty.
9. Project information and knowledge about the particular topic.
10. The Knowledge shared by experts during the event.
11. Knowledgeable event and many more improvement.
12. The abundance of knowledge and expertise that the speaker shared with us.
13. It was very informative, and, in this session, I understand new words and term of technical world.
14. This event was very helpful for knowing briefly about Machine learning, data analytics and lot of related.

Feedback Summary

PARTICIPANTS' FEEDBACK ON WHAT THEY THINK COULD BE IMPROVED.

The participants suggested the following to convey their recommendations which would enable a more focused and in-depth discussion for refinement.

1. Just more about the management.
2. The things we want in seminar has already prepared before the seminar, so not issue in the seminar.
3. To include more practical.
4. Practical implementation of Code.
5. Time management.
6. Everything was perfect.
7. More of practical practice than theory lesson.
8. The speakers could be more interactive and less of PPT reading could have been done.
9. Speakers could have been more demonstrative in their presentation.
10. Workshops should happen in these types of events.
11. I improved knowledge about data science and analysis.
12. Can Focus more on Coding for Beginner.
13. It should be more beginner oriented and should have more hand-on part.
14. As a 4th semester student some topics were really advanced for my level, and I hoped they would have taken an easy and convenient approach towards such topic.

Feedback Summary

RESPONSES FROM THE SPACE PROVIDED FOR ANY ADDITIONAL COMMENTS.

In particular, participants praised the sharing of ideas by the experts, learning about cases of different domains and Question & Answers in the open forum. The participants expressed their desire for more time to explore the details and lessons learnt of the case studies in depth.

We provide here some responses from participants' part of what they want to share:

1. Arrange session on financial market.
2. Great teamwork.
3. This event is such a knowledgeable event to us. Thanks for this event IEEE.
4. Management is proper and good.
5. Overall, very good.
6. It was quite a good experience.
7. Overall good but can be better with practical practice.
8. Certification should be provided through some Qualification Exam or Criteria.
9. Thanks for give this opportunity.
10. I have really enjoyed the event and especially the foods were delicious.
11. Thanks for the event.
12. I hope IEEE keeps organizing such events.
13. The experts should have been chosen considering there were other branches of Computer Department which weren't much open to Machine learning terminologies.
14. The sessions were amazing.
15. Interesting event.

Volunteer Credits

Event Head
Meet Suthar
Divyesh Patel
Abhay Pisharodi

Co-Head
Kenil Savani

Content
Aniket Khatri
Meet Suthar

Anchoring
Aum Pandya
Ayush Nanda
Meet Motta
Abhay Pisharodi
Dhvani Parmar
Amman Chopadiya
Hotri trivedi
Jhanvi Bhagchandani

Social Media
Chitt Bhavsar

Photography
Kenil Ramani

Management
Rajeev Joshi
Parth Panchal
Siddh Bhavsar
Nidhi Solanki
Preksha Patel
Lav Patel
Abhay Mandli
Vandana Kerai
Khetani Devki
Kenil Savani
Prashant Kumbhare
Khush Patel
Anurag Patel
Vala Harsh
Darshit Parmar
Ashish Shrivas

Budget
Viraj Modi
Jeel Vekariya

Marketing
Viraj Modi
Jeel Vekariya
Gaud Shwetkamal

Eatables & Refreshments
Om .S. Patel
Aayush Nanda

Technical
Nimit Desai
Divyesh Patel

Designing
Gautam Patidar
Aaryan Acharya