

IEEE India Council SAC Activities

Experiential Learning – Industry Visit To Nokia R&D Center



The Student Activities Committee (SAC), IEEE India Council in association with Nokia University Collaboration Team, Bangalore, successfully conducted another day-long workshop on upcoming mobile technologies, followed by network demos for students from IEEE sections across the country on 29th June 2019 (Saturday) at the Nokia R&D facilities in Bangalore. This was organized as part of Nokia Bangalore Industry-Academia collaboration engagement. It was a second visit of the calendar year. A similar visit was held for IEEE student members of the country on 13 April 2019.

This time the focus was to provide an opportunity to Post graduate and research students. The event introduced students to the upcoming communication technologies, live demonstration and hands on learning in Nokia Research Laboratories that included:

- 1) Overview of 4G wireless networks
- 2) Introduction to 5G
- 3) Overview of Internet of Things

About 60% of the audience were either Research scholars or Postgraduate students or faculty members. The content and deliberations were accordingly curated. The students and staff were accompanied by team of Nokia Experts and taken through the tour of different Laboratory facilities of Nokia. The students and staff were explained about the range of technologies and products developed by Nokia and their use in telecom networks worldwide, the working culture and the qualities to be inculcated by a budding Engineer to join an industry of this kind and opened up emerging areas for research and development. The students interactively participated in this event and all the queries raised by the students were convincingly answered by Nokia Team.

Overall, the one-day workshop was an enriching experience for the participants. The workshop saw enthusiastic participation from around 81 students representing 10 out of 11 IEEE sections of India. Students from IEEE Bengaluru, Delhi, Hyderabad, Kerala, Kharagpur, Kolkata, Madras, Mumbai, Pune and Uttar Pradesh Section under the umbrella of IEEE India Council took benefit of the opportunity. All the members attended were IEEE members of either student or professional category.

The initiative has received a very good feedback, Most of the participants asking for more such visits with diversified industries. IEEE India Council would like to put on record the support received by the Nokia team in making this visit as a learner centric, content intense and a memorable trip to each one of the attendee. Thank You team Nokia.

Report by: Dr. Rajashree Jain, rajashreejain@gmail.com

The Most Brilliant Joke Ever Written

One day, Einstein, Newton, and Pascal meet up and decide to play a game of hide and seek. Einstein volunteered to go first. As he counted, Pascal ran away scrambling to find a great hiding place. Giddily, he squeezed into a crawl space sure that he would win this time as this was his best hiding spot to date and Newton surely wouldn't find an equal. Newton on the other hand, stood right in front of Einstein, pulled out a piece of chalk and drew a box on the ground of roughly 1x1 meters. Once this was completed, he sat down neatly inside the box and waited for Einstein to finish counting. When Einstein opened his eyes, he of course saw Newton and with a bit of disappointment said "I found you Newton, you lose"... but Newton replied, "On the contrary, you are looking at one Newton over a square meter... Pascal loses!"

Webinar: 10 Workplace Skills Every Aspiring Leader Needs

Overview of the Webinar: The Webinar on “10 Workplace Skills Every Aspiring Leader Needs” is the first webinar for the year 2019-20 by IEEE India Council Student Coordination Team was held on 28th Jul 2019. It was driven by the speaker Mr. Madhav Negi, Digital Innovation Manager, DXC Technology. This webinar focused on professional etiquette and the paradigms of leadership for the people who aspire to be leaders in the future.



About the Speaker: Mr. Madhav Negi, an alumnus of IIT Kanpur is currently leading his profession as Digital Innovation Manager at DXC Technology. He has previously worked as an Associate Director at CSC, Deputy General Manager at Tech Mahindra to name a few. He is an IEEE Senior Member and has served as Chairperson of IEEE Hyderabad Section Computer Society Chapter and Chairperson, Member Activities, IEEE Hyderabad Section, Region 10.

Slides picked from the Webinar:

10+ Skills: Your stamp of excellence

Your Self	Your work
<ul style="list-style-type: none">• Yes or No• Actionable?• Keep your word• Customer centric• Your stamp of excellence• Seva outside of your work	<ul style="list-style-type: none">• Clarify the expectation• Focus on Outcomes• Roadmap the work• By when?• Iterate and Speed• Review, review review

You and Others

- Meeting Excellence
 - Do your preparation
 - Take notes of the meeting
 - Follow up on the meeting
- Give and take help
- Responsiveness

12 9/28/19

The Seven Habits Paradigm

The diagram illustrates the Seven Habits Paradigm, structured into three levels of interdependence:

- Interdependence (Top):** Habits 5 and 6. Habit 5: "Seek First to Understand... Then to be Understood". Habit 6: "Synergize". Outcome: **PUBLIC VICTORY**.
- Independence (Middle):** Habits 1, 2, and 3. Habit 1: "Be proactive". Habit 2: "Begin with the End in Mind". Habit 3: "Put First Things First". Outcome: **PRIVATE VICTORY**.
- Dependence (Bottom):** Habit 7: "Sharpen the Saw".

10 28 July 2019

Customer centric

- Know Who is your REAL customer?

*A customer is the most important visitor, on our premises.
He is not dependent on us.
We are dependent on him.
He is not an interruption on work.
He is the purpose of it.
He is not an outsider to our business.
He is part of it.
We are not doing him a favor by serving him...
He is doing us a favor by giving us the opportunity to do it.*

Good Service → Happy Customer → Customer Retention
Bad Service → Unhappy Customer → Customer Lost

Customer Loyalty
Customer Satisfaction

IEEE

The CHECKLIST
Managing Client Expectations...

- Get a contract in place
- Understand scope of work
- Who owns the work - client?
- How many revisions will you allow?
- What is the deadline? Revisions incl?
- How much and when will you be paid?
- If ongoing, terms around early termination?
- How will you communicate and how often?

Make sure you and your client understand exactly what is expected to avoid issues arising.

EXPECTATIONS vs REALITY

Please rate your experience

- Outstanding
- Excellent
- Very good
- Good
- Average
- Poor

Great Job!

About the Webinar: The Webinar started at 10:30 hours on the WebEx Meeting Platform which witnessed 134 participants. Mr. Vamsi Krishna J, Vice Chair-YP Activities & Chair- India Council SCT introduced the speaker of the Webinar by making the welcome remarks and the intentions of Webinar Series and how IEEE India Council SCT is working under the able leadership of its Execom Members. The session was handed over to Mr. Madhav Negi who kick-started the session with a thoughtful quote stating “Change the way you look at life and you will see life is Different”. He explored the topics on how important it is for a person to strive for excellence and imbibe positivity into one’s thought process to be a successful leader. Adding to the paradigms, Mr Madhav said that; despite rejection and failure, momentum is what keeps a person going and also that Self-Motivation is very important. He believes that people who are self-motivated tend to be more organised, have good time management skills and more self-esteem and confidence. While discussing on Corporate etiquettes, Mr Madhav stated that it is extremely important for an employee or a business person to keep his/her word and also that customer centric thought process always leads to customer satisfaction which eventually leads to growth in business. He explained in detail about meeting management and email etiquette. In the second half of the session the speaker discussed about how to maintain a healthy work-life balance by doing things and activities through which we can give back to the society like volunteering. He also mentioned that keeping a healthy lifestyle is also equally important to stay positive, focused and motivated to yield good results in work life as well as stay balanced. The webinar concluded with a Question and Answer session and it lasted for 1 hour and 42 minutes and the students made the best use out of it.

Webinar Streaming Link: <http://bit.ly/10WorkplaceSkills>

Report by: Webinars & Online Training Team, ieeeindiacouncilsct@gmail.com / indiasct@ieee.org

Webinar: Artificial Intelligence/Machine Learning: Where are we and Challenge Ahead

Overview of the Webinar: The Webinar on “Artificial Intelligence/Machine Learning: Where are we and Challenge Ahead” was by far the most successful webinars hosted by IEEE India Council Student Coordination Team and driven by speaker Dr. Mathukumalli Vidyasagar who is a distinguished professor from IIT Hyderabad, India and has extensive knowledge in the field of Artificial Intelligence and Machine Learning. The webinar outlines discussion of topics right from the Historical Evolution to the Recent Trends in Artificial Intelligence.



About the Speaker: Dr. Mathukumalli Vidyasagar is a Distinguished Professor and SERB Distinguished Fellow at IIT Hyderabad. He has received a number of awards and recognition for his research contributions, including a Fellowship in The Royal Society, the world’s oldest scientific academy in continuous existence, the IEEE Control Systems (Technical Field) Award, the Rufus Oldenburger Medal of ASME, the John R. Ragazzini Education Award from AACC, and others. He is the author of twelve books and 150 papers in peer-reviewed journals.

Slides picked from the Webinar:



- Current use of massive computational resources shuts out all but a few enormous-sized companies from doing research in AI.
- This is especially true of “deep learning” research.
- The research community is beginning to recognize that the “mathematical foundations of deep learning” are not well understood.
- In contrast, the mathematical foundations of “shallow learning” are quite well-understood.
- Main challenge now is to develop a suitable theory of deep learning at the scale at which it is practiced today.
- Watch Dr. Ali Rahimi's lecture slamming a lot of current research in learning as “alchemy.” [Video](#)



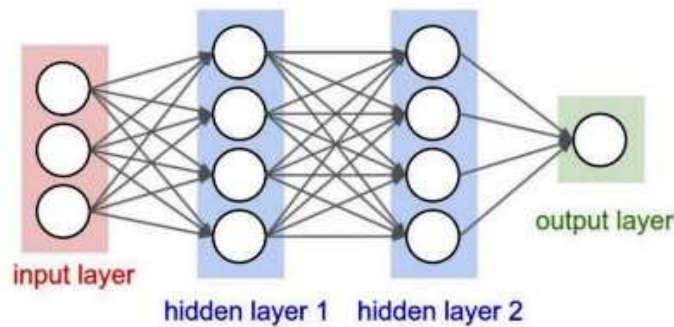
- Recent approaches to machine learning have involved genuinely new *approaches and algorithms*.
- Understanding *why, how, and when* they work is essential to ensure continuing success.
- Research focus has shifted slightly from just running lots of simulations to include also mathematical analysis.
- To be an AI/ML engineer, avoid the “bag of tricks” approach, and learn some fundamentals.



AI: Why the Excitement?
Building Machines That Can Learn and Generalize
Historical Perspective of AI
Recent Advances in AI

Early Neural Networks
Multi-Layer Perceptron Networks

Depiction of a MLPN



Source

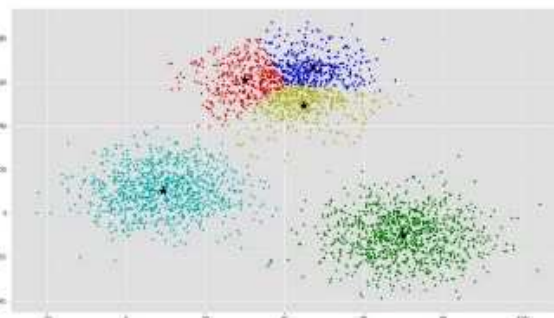
M. Vidyasagar FRS AI/ML: Current Status and Future Challenges

AI: Why the Excitement?
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Early Neural Networks
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Illustration of Clustering

The K -means algorithm is the most widely used algorithm for clustering.



Source

M. Vidyasagar FRS AI/ML: Current Status and Future Challenges

About the Webinar: The Webinar started around 10:30 hours on the 25th August, 2019 and witnessed a total participation of 600+ members on the Cisco WebEx Platform and Facebook live stream. Mr. Vamsi Krishna J, Vice Chair-YP Activities & Chair- India Council SCT introduced the speaker of the Webinar by making the welcome remarks and the intentions of Webinar Series and how IEEE India Council SCT is working under the able leadership of it's Execom Members. The session was then handed over to Dr. M. Vidyasagar who started the session by discussing the history of AI's origination, it's textbook definition and why it has imbibed excitement amongst today's technology enthusiasts. He discussed the recent advances in Image Processing, Speech Processing, Natural Language Processing , Game Playing and how AI has played a vital role in shaping them. He explained the same in detail using examples of IBM's Watson and Google's AlphaGo Framework. He also stated that "Earlier humans focussed more on Operational AI which concentrated on every minute detail of how humans perform tasks but today it is all about Functional AI, which focuses only on human functionalities."He then went on to discuss the two latest research topics in AI which revolve around Deep Learning and Reinforcement Learning along with the concepts of reasoning, learning and generalising. Next, he explained the topics of Clustering, Depiction of Linearly and Nonlinearly Separable Datasets, Multilayer Perceptron Networks in detail and finally he covered topics within Neural Networks such as Recurrent and Feedforward Neural Networks and the difference between training and testing a neural network. He also exposed to the participants the various career opportunities and research areas in the field of Artificial Intelligence. The webinar concluded with a Question and Answer session and it lasted for 1 hour and 45 minutes and the students made the best use out of it.

Webinar Streaming Link: <http://bit.ly/AIMLWebinar>

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