



Newsletter published by  
**Computer Society of India**  
Lucknow Chapter

# TechWings@CsiLko

*Wishes A VERY Happy, Healthy & Prosperous  
NEW YEAR 2021*

**Editor-in-Chief :** Dr. Pankaj K. Goswami  
**Editor :** Sri Vinay Kumar Johri

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Sri Harish Chandra Gupta  
Sri G.P. Singh  
Sri Gulab Chandra  
Dr. Puneet Misra  
Sri Pawan Kumar Nigam  
Sri Vinod Shankar Tripathi  
Ms. Shivanshi Puri



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## Message from the Regional Vice President Region -I



### **Arvind Sharma**

Regional Vice-President

Region-1

Computer Society of India

Dear friends and members,

The year 2020 although started on an upbeat note. CSI had its Annual Convention at Bhubaneswar in the month of January, although it also had certain issues but the month of March saw a situation never experienced before – the lockdown and that too not only in India but all over the world. Many people suffered and died because of Covid-19. Staying home, wearing face mask, regular use of sanitizers and regular hand wash is now new normal. Although we are hearing about the arrival of Vaccines but still we are not sure where the things are going. When we started thinking that things will get back to normal, we came to know about a new strain of Covid.

For approx. 4-5 months we were locked down in the houses. But human beings are blessed with a great instinct of moving forward, paving their way through any difficulty and thus, we started working from home. We started having online classes and we started meeting regularly through different applications in webinars and the life started moving to a new normal. In the period of last few months, with the special efforts and inputs of the Immediate Past President Prof. A.K. Nayak, CSI all over India has organised more than 500 webinars where thousands of experts participated from different walks of life – industry, academics, health care, legal etc. More than 50 international speakers participated in these webinars. When we were compelled to not to form a gathering, with the help of Technology we could enjoy the feeling of “Vasudhaiv Kutumbkam” in the cozy corners of our houses. We required to and we moved on.

Lucknow Chapter in 2021 is ready to organize the 54<sup>th</sup> Annual Convention and the preparations are 'on' despite so much of uncertainty. This year with special efforts from Hon. Secretary along with his team of some dedicated professionals initiated a Chapter News Letter which is a big achievement for the Chapter. The Chapter website was redesigned and is up and running. Many activities have been organised during this period by Team Lucknow. My heartiest congratulations.

The year 2020 is at the verge of going away. As a human being we tend to find some positivity in the changes happening around us. Thus we hope that 2021 will bring happiness and will not be giving us much trouble. I wish you all a very happy, prosperous and a healthy New Year, and extend greetings on behalf of ExecCom.

I request you to take proper care of yourself and your family. Although we are surrounded by the black clouds of uncertainty but in this uncertainty one thing is certain - “this time will also pass.”

With all the best wishes.

**Arvind Sharma**

Regional Vice-President

Region-1

Computer Society of India



**Dr. Pankaj K. Goswami**

## Editorial Message from the Editor-in-Chief

***Greetings,** to Members of CSI/Readers/Contributors,*

Welcome to year 2021, A new year marks a new beginning, new possibilities, new adventures, and new research opportunities.

I would like to express my deepest appreciation to you, our valuable authors, reviewers, and readers, for your contributions, service, and interest. You have made last year, an excellent year as your contribution towards CSI Lucknow Chapter and the newsletter TechWings@CsiLko.

Your strong inclination reflects the collective work by all editorial board members, reviewers, authors, and CSI members.

A new year is not just about changing the calendar; it is also about commitment. We, the editorial team of TechWings@CsiLko, will continuously work hard to better serve our authors and readers. We wish everyone a rewarding, joyous new year and look forward to working with you in 2021.

We wish that new year marks a milestone in the history of the newsletter because it comes with some important challenges and enhancements in indigenous computing technologies.

I thank my entire editorial board, and reviewers for all their support. Together we would work towards making the newsletter a truly influential publication. Comments, suggestions, and special issue proposals are always welcome.

With best wishes of New Year-2021,

**Dr. Pankaj K. Goswami**

Editor-in-Chief of TechWings@CsiLko, Newsletter  
& Chairman CSI-Lucknow Chapter (2020-2021)

chairman@csi-lko.org

goswamipankaj2k1@yahoo.com



## Vinay Kumar Johri

### Message from the Editor / Hon. Secretary

**Greetings Ladies & Gentlemen / Girls & Boys !!!!!**

We have immense pleasure to share with you the 6<sup>th</sup> Volume of TechWings@CsiLko on start of New Year.

We are grateful to CSI Headquarter Office bearers especially Immediate Past President, President, Hon. Secretary & Treasurer, Regional Vice-President Region – I, Management Committee / Nomination Committee Lucknow Chapter, all CSI Members of the Chapter for extending their guidance and support, their enthusiasm and active participation in various Webinars, Conferences and other activities as a result of which we could maintain a regular connect with everyone.

We are thankful to all the eminent Speakers who spared their valuable time and delivered a series of Technical Talks and other relevant topics.

We loved to have Students in our online Seminars/events with full enthusiasm and active participation, especially tiny kids to mention a few Master Shiv, Master Panshul Goswami & Master Nishit Soni in the Webinar on Robotics.

We are also thankful to the Authors who have contributed their Articles in this issue and invite others to contribute for the coming issues of Newsletter which we may start monthly from next issue onwards. The Contributions may be sent to [chairman@csi-lko.org](mailto:chairman@csi-lko.org) or [secretary@csi-lko.org](mailto:secretary@csi-lko.org) following the Guidelines being sent on your Mail-ids. The earlier issues of CSI Lucknow Chapter Newsletter **TechWings@CsiLko** can be accessed on the Refurbished CSI Lucknow Chapter website <http://csi-lko.org/>.

This Year we organized a fun event CSI FUN MELA for CSI Members and their families in which there was active participation of our Members with their families and they made it a Big Success. We are going to organize another Fun event on 03<sup>rd</sup> January 2021 for CSI Members and their families in which their Children/Grand Children have been invited to actively participate with their Talent & Imagination. We hope that you all will make this event also a Grand Success.

We also welcome our New Members who obtained CSI Life/Individual Membership during this Year and associated with the Lucknow Chapter.

With this, Wishing you and your Family a Very Happy, Healthy & Prosperous New Year 2021.  
Stay Connected, Stay Safe & Stay Healthy.

Hope to meet you all on 03<sup>rd</sup> January 2021 in the Online Event “**HUM SAB JUDGE HAIN**”.

**Vinay Kumar Johri**

Editor - TechWings@CsiLko,

CSI Lucknow Chapter Newsletter&

Hon. Secretary CSI Lucknow Chapter (2020-2022)

[secretary@csi-lko.org](mailto:secretary@csi-lko.org) / [vinay030207@yahoo.co.in](mailto:vinay030207@yahoo.co.in)

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**Immediate Past Chairman,**  
**CSI Lucknow Chapter**  
**STD & ASIO**  
**NIC, UPSC, Lucknow**  
**gp.singh@nic.in**  
**9415085934(M)**

## Message from Immediate Past Chairman

It is my immense pleasure to share with you that we have completed a year of our newsletter - TechWings@CsiLko, an initiative that aims to spread and share technical knowledge among the IT fraternity of Lucknow. During the past year, when the entire world was dealing with multiple lockdowns, it was the technology that made sure that essential services and activities never stop. Across the globe, the continuity of business was made possible due to the implementation of various IT solutions. Though, on one hand this pandemic created havoc in the society and many people suffered heavily due to this calamity, the positive side is that it opened up many new areas of innovation and business opportunities. Today, the whole world is gradually accepting this 'new normal' while trying to reduce the fear of the virus, as much as possible. Since, this 'new normal' might last for quite some time, to keep things rolling, today, many physical activities are converted into virtual ones, and CSI Lucknow chapter is not afar. We have gracefully embraced this transformation by switching to virtual seminars from physical events. While the physical workshops/seminars were just limited to the people from local levels, the virtual webinars managed to attract a lot more participants that too from the entire country. Covering a variety of topics, right from psychology to core IT, many subjects were discussed in several webinars that organised during the year. The interesting topics of these webinars attracted a large number of attendees and made the efforts of CSI Lucknow chapter worthy. We were also able to observe that the current times are just not limited to high-paced goal chasing, but there's also unrest caused due to the rapid changes in technology which need to be addressed. While COVID made the whole world stand still, the advancements in technology have played a vital role in maintaining the continuity of work as well.

Like every night that is followed by a bright morning, I am hopeful that 2021 will bring joy and prosperity for all of us. CSI Lucknow Chapter will continue to publish TechWings@CsiLko with more technical inputs along with new topics and up-to-date information that is accessible to everyone.

**TechWings@CsiLko** has created a platform to share experiences, observations and expertise on upcoming technologies, and we hope that more and more content is contributed by the members and students for the benefit of the society.

We welcome suggestions and feedback from our readers for continuously improving the quality of the newsletter. I wish the best for the future publications of the CSI Lucknow Chapter newsletter and I hope that 2021 will be a great success for all of us.

Thank you  
Happy New Year 2021

# Events Organized

## One Day International Webinar on IT Security by CSI BBDITM Student Branch in Technical Collaboration of CSI Region – 1 & CSI Lucknow Chapter on 11<sup>th</sup> October 2020

Compiled by Dr. Pankaj Goswami & Mr. Vinay Kumar Johri

One day International Webinar on IT Security was organized by CSI BBDITM Student Branch in collaboration with Computer Society of India Region – I & CSI Lucknow Chapter on 11<sup>th</sup> October 2020.

**CSI BBDITM STUDENT BRANCH**  
Organizes One Day **International** Webinar On

**IT SECURITY**  
With Technical Collaboration Of  
**CSI Region 1 & Lucknow Chapter**  
Link -> <https://forms.gle/9dayUrgV44mRxMH7>  
**Registration Deadline**  
10 Oct, 2020

**Chief Patron**  
**Mrs. Alka Das**  
Hon'ble Chairperson BBD Group

**Patron**  
**Mr. Viraj Sagar Das**  
President, BBD Group

**PLATFORM --**  


**Inaugural Address**  
**Prof. A.K. Nayak**  
Chairman Academic & Awards Committee, CSI

**Presidential Address**  
**Mr. R.K. Vyas**  
President, CSI

**RVP Address**  
**Mr. Arvind Sharma**  
Vice President Region-1, CSI

**Welcome Address**  
**Prof. B.K. Chauhan**  
Director, BBDITM

**Keynote Address**  
**Dr. Shaillesh Kr. Shrivastava**  
Scientist & Head Digital, Govt. Research Center, NIC, Patna

**Invited Address**  
**Dr. Malaya Nayak**  
Executive Director, IT Buzz Ltd. London

**Invited Address**  
**Prof. Prashant R. Nair**  
Chairman, IQAC Amrita Vishwa, Vidyapeetham Amrita School of Engg, Coimbatore

**Co-Chairman Address**  
**Dr. Pankaj Kumar Goswami**  
Chairman at CSI Lucknow Chapter

**E -Certificates**  
Will Be Provided to Attendees **For \*Free**  
**11<sup>th</sup> October 2020 at 2 p.m.**

**Designer :** Uttkarsh Upadhyay & Rahul Kumar **Calls & Query –** Diwakar Tripathi (President) CSI BBDITM STUDENT COUNCIL **Ph no. 6306697997**

# 33<sup>rd</sup> Annual General meeting of Computer Society of India Lucknow Chapter held on 08<sup>th</sup> November 2020 through online mode

**Reported by: Dr. Pankaj Goswami & Mr. Vinay Kumar Johri**

The 33<sup>rd</sup> Annual General Meeting for the Year 2019-2020 of Computer Society of India, Lucknow Chapter was held through online mode on 08<sup>th</sup> November 2020 (Sunday). The said Annual General meeting was planned on 20<sup>th</sup> March 2020 at Hotel De Global Park, Nirala Nagar, Lucknow but could not be held due to the current pandemic of COVID-19 due to restrictions on organizing such events.

The meeting started with the address of Mr. G.P. Singh, Immediate Past Chairman by welcoming the members of CSI Lucknow Chapter present in the Online Annual General Meeting and briefly explained about the AGM and also that the said AGM could not be held in the month of March 2020 due to pandemic situation of COVID-19 and imposition of restrictions by the UP Government for organizing the events in the Hotels etc.

Mr. Vinay Kumar Johri, Hon. Secreatry presented the minutes of 32<sup>nd</sup> Annual General Meeting of the Chapter held on 24<sup>th</sup> march 2019 and minutes were approved by the House.

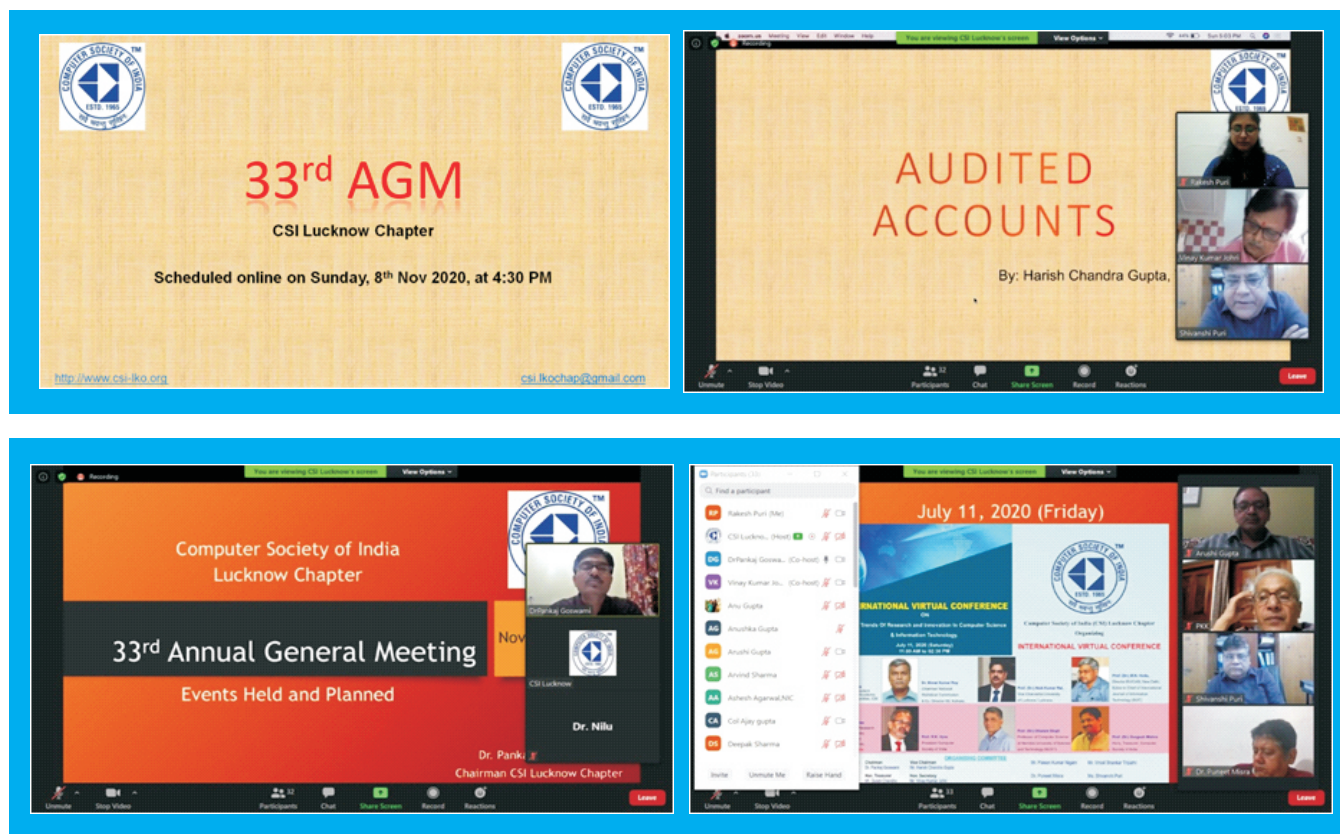
Mr. Harish Chandra Gupta, Vice Chairman cum Chairman elect presented before the house the audited accounts for the Financial Year 2018-2019 on behalf of the Hon. Treasurer Mr. Gulab Chandra which were approved by the House after discussions by the members.

Mr. Vinay Kumar Johri, Hon. Secretary made a presentation of the activities planned & held by CSI Lucknow Chapter during the Year 2019-2020 which was appreciated by the members.

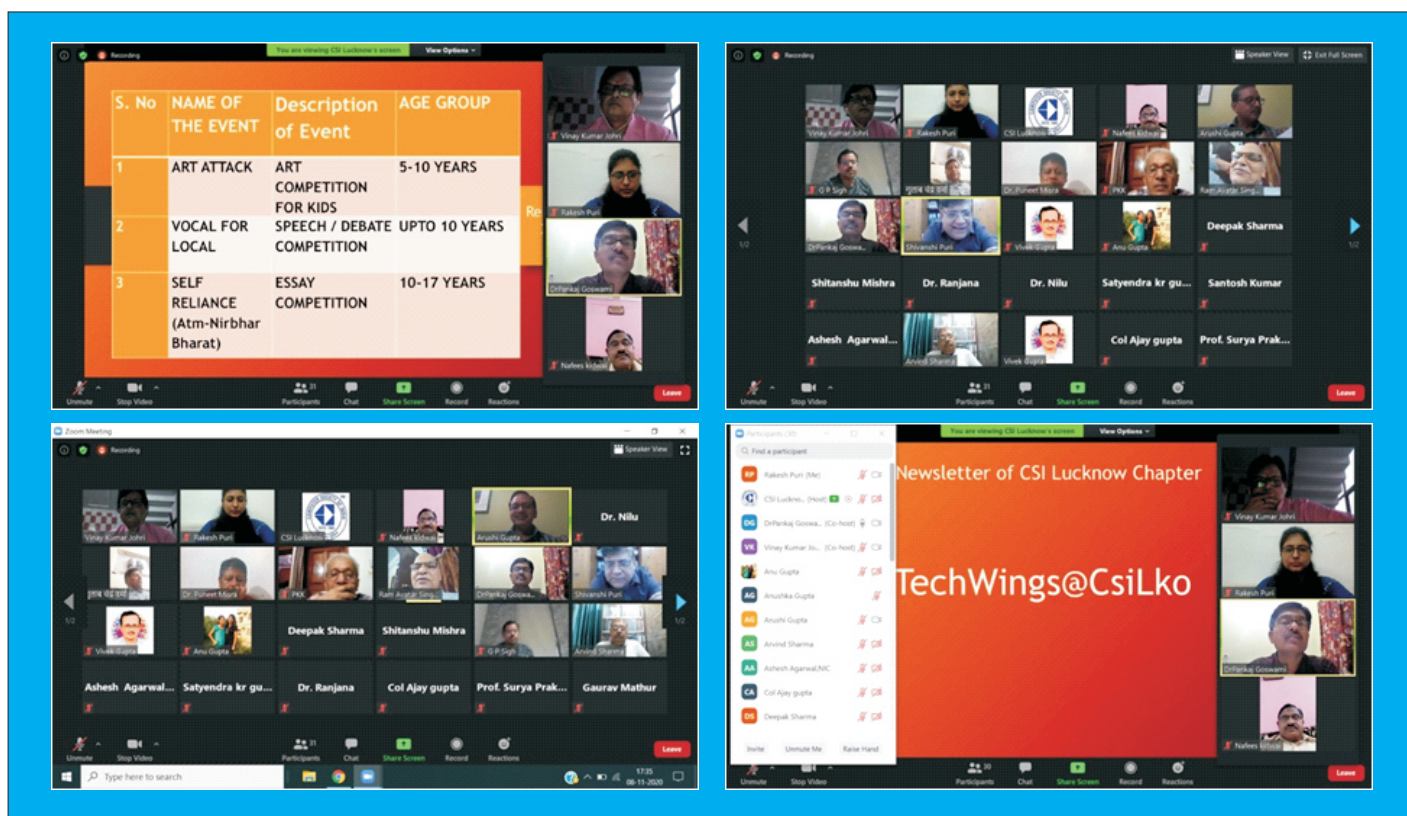
Dr. Pankaj Goswami has delivered a presentation of the activities held since the beginning of his tenure as Chairman and also the roadmap of future events being planned in the coming months. The members appreciated that regular activities are being organized by the Chapter through online Seminars even in this pandemic situation.

The event was successfully organized by the coordinated efforts of the entire Management Committee of Computer Society of India Lucknow Chapter and well co-ordinated by Dr. Nilu Singh, our CSI member. The Technical contribution was made by

**Mr. Vinod Shankar Tripathi, our Management Committee member. The event proceedings and screen shots etc. have been contributed by Miss Shivanshi Puri.**







## Webinar on Artificial Intelligence : History & Evolution Organized By State Student Coordinator – Uttar Pradesh In Association With Regional Vice President Region – I & Computer Society of India Lucknow Chapter held on 12<sup>th</sup> December 2020

**Reported by:**

**Dr. Pankaj Goswami, Ms. Shivanshi Puri & Mr. Vinay Kumar Johri**

A Webinar on Artificial Intelligence – History & Evolution was organized by State Student Coordinator Uttar Pradesh in association with Regional Vice President Region I & Lucknow Chapter on 12<sup>th</sup> December 2020. The Key Note Speaker was Dr. Puneet Misra from University of Lucknow who covered History & evolution of Artificial Intelligence, Artificial Intelligence for embedded systems, AI applications etc. The Webinar was attended by Students and academia personalities from various parts of the Country. Dr. Puneet Misra also apprised that this is the First event for the Students and a series of events will be organized in near future on a regular basis and also shared the Date Calendar for coming events.

Dr. Pankaj Goswami, Chairman Computer Society of India Lucknow Chapter addressed the audience and advised about CSI Lucknow Chapter and its various past activities during the pandemic period on a regular basis. He also elaborated about the Newsletter TechWings@CsiLko being published by the Chapter on Quarterly basis and invited contribution of Articles by the Students and shared the guidelines regarding the Articles and deadline of the date for the forthcoming issue of Newsletter. Vote of thanks was delivered by Mr. Rakesh Puri, ex-Chairman & Patron of CSI Lucknow Chapter. Technical guidance and support was provided by Mr. Vinod Shankar Tripathi. Ms. Shivanshi Puri covered the whole event. Mr. Vinay Kumar Johri, Hon. Secretary of the Chapter moderated the event.



COMPUTER SOCIETY OF INDIA

State Student Coordinator  
in association  
Regional Vice President  
&  
CSI, Lucknow  
Organizing Online Webinar (Sat)  
Artificial Intelligence H...  
Saturday, 12 December, 2020  
Keynote Speaker  
Dr. Puneet Nigra

## **Webinar on A Tribute to the Legendary Dr FC Kohli - Disruptive Innovation which created the Indian IT Industry Organized By Computer Society of India Lucknow Chapter held on 18<sup>th</sup> December 2020**

**Reported by: Dr. Pankaj Goswami & Mr. Vinay Kumar Johri**

A Webinar was organized by the Computer Society of India Lucknow Chapter for A tribute to the Legendary Dr FC Kohli (Founder CEO Tata Consultancy Services (TCS) & Father of Indian IT Industry) – Disruptive Innovation which created the Indian Industry. CSI Lucknow Chapter invited Mr. Jayant Krishna, Group CEO – UKIBC, ex-CEO/COO-NSDC & Former Regional Director (TCS) as Key Note Speaker to grace the occasion and to offer the tribute to Dr FC Kohli.

Mr. Vinay Kumar Johri, Hon. Secretary CSI Lucknow Chapter introduced Ms. Kamakshi Puri, the young CSI Member associated with Lucknow Chapter to the Audience and the Invitees for moderating the event.

Ms. Kamakshi Puri invited Prof. R. K. Vyas, President Computer Society of India for his Presidential Address and introduced him to the Audience. Prof. Vyas welcomed the Key Note Speaker Mr. Jayant Krishna and all the CSI Members and other Invitees for connecting throughout the Country and thanked Management of CSI Lucknow Chapter for organizing the event A Tribute to the legendary Dr FC Kohli, father of Indian Industry and Founder CEO of Tata Consultancy Services – Disruptive Innovation which created the Indian Industry. He recalled that how various innovative ideas of Dr. Kohli taken shape in TCS. He pointed out that Mr. Jayant Krishna is the right person to speak about Dr. Kohli and to offer a Tribute to him.

Ms. Kamakshi Puri then invited Mr. Jayant Krishna, the Key Note Speaker and Group CEO – UKIBC, ex-CEO/COO-NSDC & Former Regional Director (TCS) to grace the Occasion and offer Tribute to Dr. Kohli. She briefly read out the Profile of Mr. Krishna introducing him to the Audience.

Mr. Krishna shared that Whatever I have done in my Life, it is small fractions what Dr. Kohli achieved. He recalled that whenever the CV of DR. Kohli was read, he says it was like a Matrimonial CV and it is coming too late. Mr. Krishna remembered all his colleagues and friends from CSI / TCS and others who were present in the event and recalled his experience of all past Annual events held at Lucknow where Country Heads from Various Companies used to participate and his TCS Networks.

Mr. Krishna apprised that he will cover the Disruptive Innovations what Dr. Kohli brought not general disruptive innovations. He remembered the Gratitude to Dr. Kohli the Country used to call Father of IT Industry. He shared about Dr. Kohli's background, education, his experience in Tata Electric Company (Power Sector), Load Dispatch System used in mid 50s. In 1967-68, most people were not knowing What the Computers are, then Mr. JRD Tata picked up Dr. Kohli for Computer Set up.

Mr. Krishna remembered various shades of Dr. Kohli's personality viz. he was very keen to work actively, he was instrumental in development of Hospital Accounting System, he played vital role in setting up of IIT Kanpur & IIT Bombay, he got scholarship from Queens University. He used to say that All I have done in my Life, I am trying to repay the Gratitude to the Country. He was a Visionary. His dressing sense for Self and his staff, Discipline, his love and affection, his kind Gestures, Values & Relations, his Leadership, so much to say and share. He also remembered that Softwares not developed in Local Languages.

A Question Answer session was coordinated by Dr. Puneet Misra and Mr. Krishna shared various experiences and answered all the Questions put up by Dr. Goswami and others.

Ms. Kamakshi Puri invited Prof. A.K. Nayak, immediate Past President Computer Society of India and introduced him to the audience by reading out his brief profile.

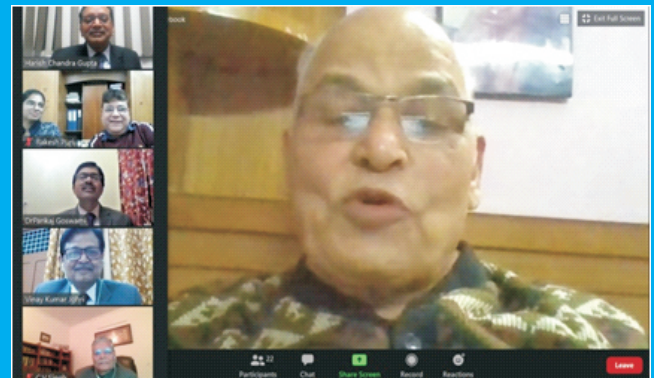
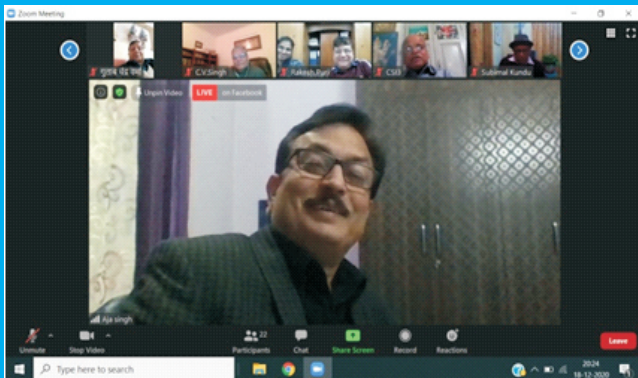
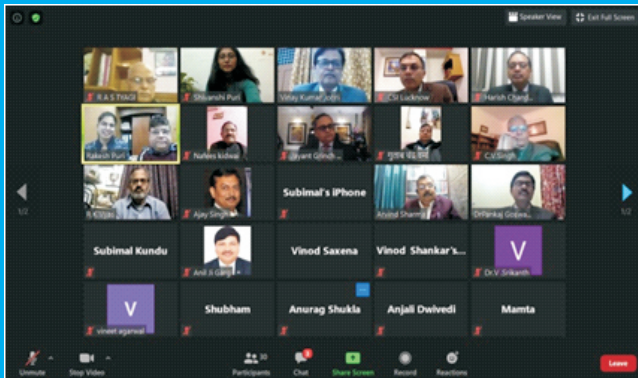
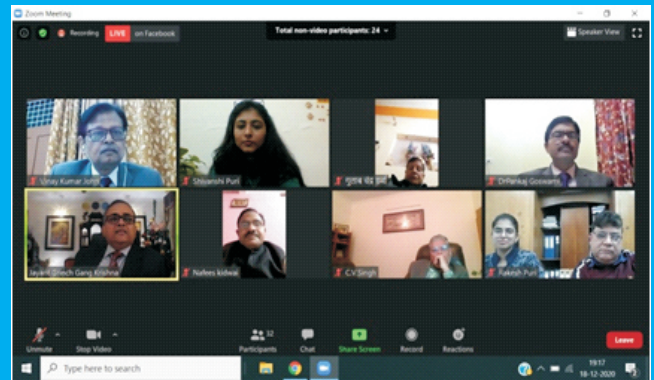
Prof. A.K. Nayak talked about Dr. FC Kohli and Mr. Jayant Krishna and shared his experience of meeting Dr. Kohli. Prof. Nayak advised the audience that he planned for the Publication of experiences about Dr. FC Kohli which are being published in the CSI Communications. He also apprised the audience that during the pandemic period regular Online events are being organized by the Computer Society of India and all Chapters including Lucknow Chapter and more than 500 activities so far have been organized. He targets about organizing 1000 such events during this period.

Ms. Kamakshi Puri invited Mr. Harish Chandra Gupta for giving Vote of Thanks and introduced him to the audience by reading out his brief profile.

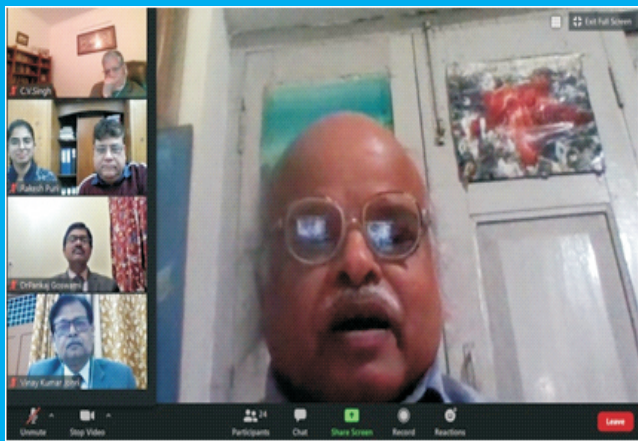
Mr. Harish Chandra Gupta delivered Vote of Thanks and thanked the Key Note Speaker Mr. Jayant Krishna, Prof. A.K. Nayak, Prof. R K Vyas, Mr. Arvind Sharma, Dr. Pankaj Goswami and all the distinguished CSI Members and others present in the event.

Mr. Vinod Shankar Tripathi extended Technical support for smooth conduct of the event and Ms. Shivanshi Puri covered the whole event. Young and dynamic CSI Member of Lucknow Chapter Ms. Kamakshi Puri moderated the whole event.











**Webinar on Python for Data Science Organized By State Student Coordinator – Uttar Pradesh  
In Association With Regional Vice President Region – I & Computer Society of India Lucknow  
Chapter held on 20<sup>th</sup> December 2020**

**Reported by:**

**Dr. Pankaj Goswami, Ms. Shivanshi Puri & Mr. Vinay Kumar Johri**

A Webinar on Python for Data Science was organized by State Student Coordinator – Uttar Pradesh Dr. Puneet Misra in association with Regional Vice President Region – I & Computer Society of India Lucknow Chapter on 20<sup>th</sup> December 2020. The Key Note Speaker was Prof. Rajeev Pandey, Head Department of Statistics, University of Lucknow.

Dr. Pankaj K. Goswami Chairman CSI Lucknow Chapter welcomed the Key Note Speaker Prof. Rajeev Pandey and all the participants, Students and others present in the Webinar. Dr. Goswami apprised all about the regular events being organized by the Chapter and invited the Students to contribute their Articles for the Chapter Newsletter TechWings@CsiLko for which the date was extended from 20<sup>th</sup> December 2020 to 24<sup>th</sup> December 2020 and the guidelines and other details were shared with the audience.

Mr. Arvind Sharma, Regional Vice President Region – I apprised the students about Computer Society of India and motivated them to get associated with the CSI and take active participation in the coming Annual Convention to be held at Lucknow in 2021.

Dr. Pandey shared with the Students and others about the importance of Python for Data Science and why and how to learn the Python for data Analytics.

He apprised that the Goal can be achieved in 5 very simple Steps :

Step - 1 : Learn Python Fundamentals

Step – 2 : Practice Mini Python Projects

Step – 3 : Learn Python Data Science Libraries

Step – 4 : Build a Data Science Portfolio as you Learn Python

Step – 5 : Apply Advanced Data Science Techniques.

Dr. Pandey shared Important Resources and Studies to learn Python, Why is Python essential for Data Analysis and Data Science, Why Python is essential for Data Analysis :

- It's flexible
- It's easy to learn
- It's open source
- It's well supported.

He also covered Python Statistics Fundamentals viz. Descriptive Statistics – The Quantitative Approach & The Visual Approach, Types of Measures – Central Tendency, Variability, Correlation or Joint Variability, Mean, Median, Mode, Population & Samples, Statistical Inference, Outliers etc.

Mr. Vinay Kumar Johri, Hon. Secretary CSI Lucknow Chapter thanked Dr. Pandey for his very informative and educative session which forced to develop an interest in learning by a person like him, he recalled his old memories of various concepts while studying them in his MCA studies. He also thanked the Students, other participants etc. and requested Students to come forward for educating their Institutes/Universities/Colleges about CSI Lucknow Chapter and he assured that he alongwith other Office Bearers will visit their Institute etc. and meet the concerned Authorities there for making them Institutional Members of the Society and opening of a Student Branch at their place of Learning.

Dr. Puneet Misra also thanked Dr. Pandey and other Students and all for their active participation in the event and moderated the whole event.

The screenshot displays a Zoom meeting interface in 'Gallery View'. The top of the window features a title bar that reads 'Zoom Meeting'. Below this, a grid of video feeds shows participants. Each video feed is accompanied by a name label. The participants visible are:

- Row 1: A participant with a red patterned background, Pranjal Srivastava, Pranay Maurya, Vibhuti AWASTHI, and Akash Kumar.
- Row 2: A participant with a blue patterned background, SHANTHI C., a participant with a dark background, a pink square icon with the letter 'D', and a participant with a dark background.
- Row 3: Anshu Agrawal, Riga Gupta, Harshini Kandam..., Minnu A., BHARANIDHAR..., and Gurpreet Singh...
- Row 4: Subhikha Choudhary, Abhay pr. Singh, a participant with a dark background, Mr. PREETI, and a participant with a dark background.

At the bottom of the screen, there is a toolbar with various icons for meeting controls such as chat, mute, and screen sharing. The overall layout is typical of a Zoom desktop application window.

WHY IS PYTHON ESSENTIAL FOR DATA ANALYSIS?

- It's Flexible
- It's Easy to Learn
- It's Open Source
- It's Well-Supported

Pranjal Srivastava

[illegible]

# Newsletter of CSI Lucknow Chapter


## TechWings@CsiLko

### Call For Article


For Next Issue of TechWings@CsiLko  
By December-20, 2020

#### Guidelines

800-1000 Words in single line space & single column,  
Times New Roman Font including Title, Author Name,  
Author Affiliation, email id, Abstract, Keywords,  
References in IEEE/Springer format.



CSI Lucknow Chapter





## **Webinar on Digital Transformation Over the Years- Sharing Experience**

### **Organized By Computer Society of India Lucknow Chapter Held on 23rd December 2020**

**Reported by : Dr. Pankaj Goswami, Ms. Shivanshi Puri & Mr. Vinay Kumar Johri**

Mr. Vinay Kumar Johri, Hon. Secretary CSI Lucknow Chapter coordinated the whole event as Moderator. He briefed to the audience about Mr. Arvind Sharma, Regional Vice President Region – I who welcomed the Key Note Speaker Mr. C.V. Singh and all the audience present in the Webinar organized by Computer Society of India Lucknow Chapter on 23<sup>rd</sup> December 2020.

Mr. Sharma thanked all the Senior Members of Computer Society of India and all for their significant contribution for their guidance and support for successful run of the Chapter and joint efforts of all the concerned. He also mentioned about the Northern Regional Conference (NRC-19) held on 14<sup>th</sup> December 2019 at Lucknow and apprised that Office Bearers from the CSI Headquarter also attended the event.

Mr. Vinay Kumar Johri invited Mr. C.V. Singh (CSI Fellow Member & ex-Vice President Tata Motors & Tata Daewoo and ex-Managing Director, UPTeC) and briefed to the audience about the Journey of Mr. Singh from his IIT Kanpur onwards and requested Mr. Singh to share his experience on Digital Transformation Over the Years – Sharing Experience.

Mr. Singh shared his journey of 5 decades and his association with Computer Society of India. He shared his experience of Computerising Mess facility at IIT Kanpur when he was a student. He talked about associative learning, Processes as Key Performance Measurements and talked about 3 processes viz. Quality Dimension, Cost Dimension & Time Dimension.

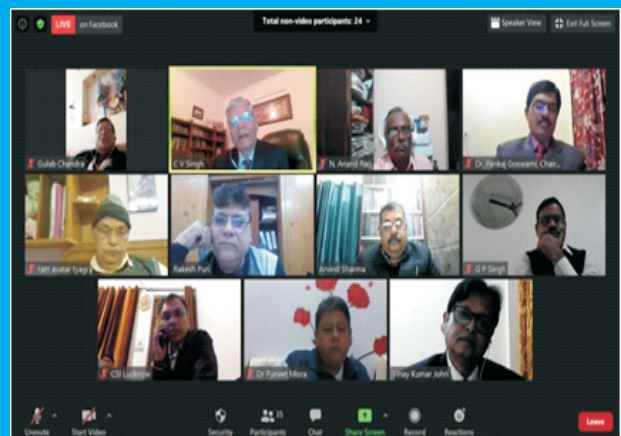
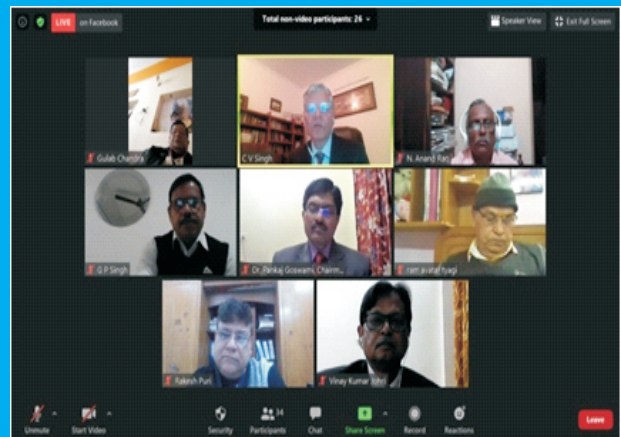
He shared experience of over 50 Years in following 5 phases and learning from all these phases :

- First Phase started from 1965 - 1975 which was Batch Processing era.
- Second Phase started from 1975 - 1985 in which Computer Technology & Telecom started working together.
- Third Phase started from 1985 – 1995 which was a very exciting period in which Users had more Computing Power in their hands in the form of Personal Computers & Networking. A cultural change in the Organization in terms of discipline. Computing gained acceptance.
- Fourth Phase started from 1995 – 2005 in which there was development of internet. All applications of previous Generations were redesigned to take advantage of internet. ERP was implemented.
- Fifth Generation started from 2005 – 2015 in which full implementation of ERP, Supply Relationship Management, Competitiveness, Product Life Cycle Management etc. He also shared Digital Transformation in South Korea Project. Acquisition of Tata Daewoo was done by Tata Motors. New Technology started coming up. Digital Transformation gave Life to First four Generations.
- Information Technology became the integral part of the product, embedded sensors, Processors, Product Clouds etc. This phase is called Internet Of Every Thing (IOT to IOET). Smart Connected Products have 3 parts viz. Physical part, Smart Components and Connecting Component.
- Current Phase – 2015 onwards in which we talk about Industry 4.0 and use of Technology, Digital Transformation – Conversion of 10 Technologies. Disruption in Intelligent ERP (Excellent Run Production). Planned Control System, Data Acquisition System, Intelligent Human Machine Interface.
- Covid had been biggest Change Agent in Digital Transformation. Work from Home or Work from Anywhere is now New Normal.

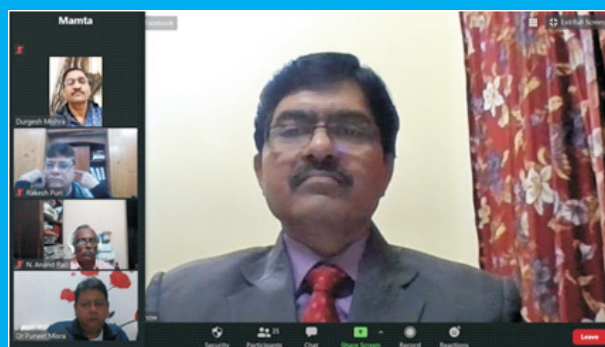
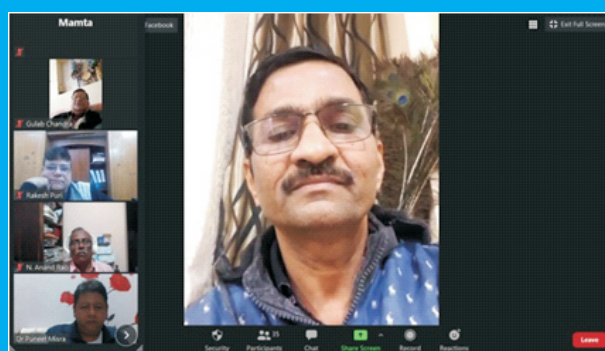
Dr. Puneet Misra coordinated the Question Answer Session in which Audience raised their questions and Mr. Singh answered all their queries to full satisfaction of the audience.

Dr. Pankaj Goswami, Chairman CSI Lucknow Chapter apprised the audience about the CSI Lucknow Chapter and various regular activities undertaken by the Chapter even in this Pandemic Period maintaining a Connect between the members and personalities from all walks of Life.

Vote of Thanks was delivered by Mr. H.C. Gupta, Vice Chairman of the Chapter. Mr. Vinod Shankar Tripathi extended Technical support for smooth conduct of the event and Ms. Shivanshi Puri covered the whole event.







# Author's Gallery

**Robotics: Requirements of todays and future generation**

**Diwakar Tripathi**

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## About the Authors



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## Introduction

Robotics is the engineering science and technology of robots, and their design, manufacture, application, and structural disposition. It requires a working knowledge of electronics, mechanics, and software. If we say it in simple format then we can say need good knowledge of both hardware and software for Robotics.

## Types Of Robots

There are listed type of the robots on the basis of use in different fields.

- 1) Drones   2) Aerospace Robot   3) Consumer Robot   4) Disaster Response Robot   5) Education Robot   6) Entertainment Robot   7) Exoskeletons Robot   8) Humanoids Robot   9) Industrial Robot   10) Medical Robot   11) Military & Security Robot   12) Research Robot   13) Self-Driving Cars Robot   14) Telepresence Robot   15) Underwater

## Application of Robots

- ➡ Helping fight forest fires
- ➡ Working alongside humans in manufacturing plants (known as co-bots)
- ➡ Robots that offer companionship to elderly individuals
  - Surgical assistants
- ➡ Last-mile package and food order delivery
- ➡ Autonomous household robots that carry out tasks like vacuuming and mowing the grass
- ➡ Assisting with finding items and carrying them throughout warehouses
- ➡ Used during search-and-rescue missions after natural disasters

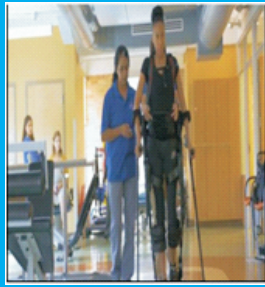


## Some Popular Robots:-

1. Milo Robot, 2. Ekso GT, 3. Jibo, 4. Double, 5. Deka Robot, 6. Pepper, 7. LG Rolling Bot, 8. Moley, 9. Spot, 10. Honda Asimo



**Milo Robot**



**Ekso GT**



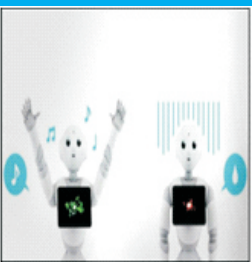
**Jibo**



**Double**



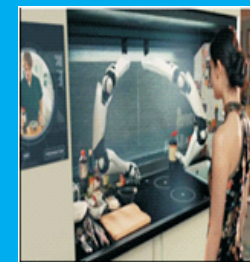
**Deka Robot**



**Pepper**



**LG Rolling Bot**



**Moley**



**Spot**



**Honda Asimo**

## FUTURE OF ROBOTICS

There is no denying that Robotic technologies are all set to change the way things are done in the industries in which they are being implemented. Entrepreneurs are voicing a similar sentiment and are clearly optimistic about the use of Robotics in various industrial segments. Robotics is mainly capturing industries like manufacturing, pharmaceutical, FMCG, packaging and inspection. A bit of Robotics would also be seen in the healthcare sector primarily in the form of assistive and skill development technologies. The other promising sectors are defense and education.

### Advantage of Robotics

Following are the benefits or advantages of Robotics:

- ➡ Robot can be used to perform any risky task.
- ➡ Robots have more productivity compared to humans in the same time period. Robots can produce 25% to 40% more parts annually.
- ➡ Task of the robot is totally depend upon the programing. which is done for robot
- ➡ Robots can perform routine and repetitive tasks easily. This will free up human resources to perform more value addition jobs. This way both robots and humans can work together for the development of an organization effectively and efficiently. The robots which work in collaboration with humans are known as cobots.
- ➡ In certain situations, robots can help in saving huge amount of labour costs.
- ➡ Business can achieve Return on Investment (ROI) quickly and in less time period due to high productivity.

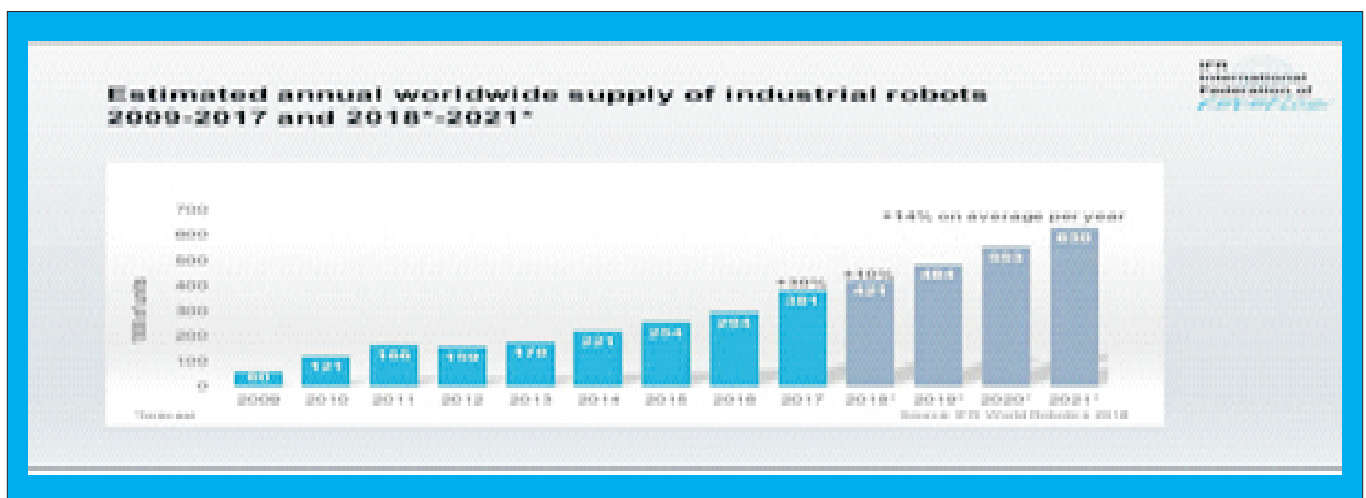
## Disadvantages of Robotics

Following are the disadvantages of Robotics:

- ➡ If the robots are not well maintained, it will malfunction, this may be disastrous during manufacturing
- ➡ Operational costs are higher due to power costs and grease costs.
- ➡ Highly skilled man power is needed to implement and maintain robots. This is provided by robotics company. This will increase the initial and operational costs of the companies which use robots in their operations.
- ➡ The robots are very costly and are available in different prices as per applications of use.
- ➡ The robots can easily be targeted by wrongdoers.

## Conclusion

Today we find most robots working for people in industries, factories, warehouses, and laboratories. Robot can be used to perform any task at any risky place. Robots are useful in many ways. For instance, it boosts economy because businesses need to be efficient to keep up with the industry competition. Therefore, having robots helps business owners to be competitive, because robots can do jobs better and faster than humans can, e.g. robot can build, assemble a car. Yet robots cannot perform every job.



## References

- ➡ Introduction of Robotics: Mechanics and Control by John J Craig
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- ➡ <https://www.rfwireless-world.com/Terminology/Advantages-and-Disadvantages-of-Robotics.html>
- ➡ <https://robots.ieee.org/learn/types-of-robots>
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- ➡ <https://ifr.org/ifr-press-releases/news/global-industrial-robot-sales-doubled-over-the-past-five-years>



# Sentiment based spam detection on code mixed data - A Hybrid Approach

Dr. R. Thirumalai Selvi<sup>1</sup>, P. Gunasundari<sup>2</sup>

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## About the Authors



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**Dr. (Mrs.) R. Thirumalai Selvi** is currently the research supervisor and Assistant Professor in the Department of Computer Science, Govt. Arts College (Men) (Autonomous), Chennai. She has over 20 years of experience in various arts and science colleges and as a research supervisor. She is guiding many PhD students registered under various universities.

Abstract :

The growth of Internet and social media has increased the number of users to express their view, thoughts and comment on the social media platforms. Due to this the growth of spammers and spam, expressing the vision in 2 or more language is also increased. This has given the ideas of combining these two applications with various approach like Machine learning, Deep learning. Finally, a hybrid approach has been proposed.

## INTRODUCTION

The massive proliferation of social media has given a new form for the words code mixing and code switching. Until the growth of social media, the words are just seen in the context of English Learning and Teaching (ELT), but totally changed in terms of social media text. In earlier days, bilingualism was used in the classroom teaching to facilitate the teaching learning process easier. But nowadays people are likely to express their views through bilingual or multilingual namely called as code mixing or code switching with the help and growth of Unicode. People feel that they are very strong enough to express their view, thoughts, review and comments in this way. It has also paved the way for few growing components social media, code mixing, sentiment analysis, etc.,

## CODE MIXING AND CODE SWITCHING

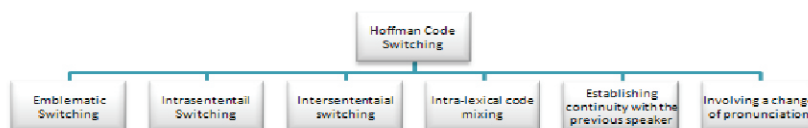
Code mixing is that the development of blending the vocabulary and syntax of multiple languages within the same sentences. Code switching is the combination of elements from two languages in a single utterance.

## TYPES OF CODE SWITCHING

According to Blom and John Gumperz identified two categories of code switching:

- 1) Situational code switching – happens when there is a change of topic or situation.
- 2) Conversational code switching – happens when there is no change.

According to Hoffman (1991:112) described code switching based on the juncture or the scope of switching as follows:



- a) Emblematic switching: In this type of switching a set of phrases and tags from one language is included into an expression otherwise in another language.
- b) Intrasentential switching: The type of switching occurs within a sentence boundary or clauses.
- c) Intersentential switching: The switching happens at a clause or in the boundary of the sentences, where every clause or sentences is in one language or in the other.
- d) Intra-lexical code mixing: The type of code mixing which happens within word boundary (i.e.,) at the ending of the word.
- e) Establishing continuity with the previous speaker: This type of switching happens to continue the expression of the preceding speakers as one Indonesian speaker speaks in English and then other speaker tries to respond in English.
- f) Involving a change of pronunciation: This type of code mixing or switching take place at the phonological level.

## SOCIAL MEDIA

An interactive digital media that open the door for expressing their vision, views, thoughts, interest and comments through the virtual platforms.

It can be classified as follows (2) :

- 1) Social networks: Facebook, Twitter, LinkedIn
- 2) Media sharing networks: Instagram, YouTube
- 3) Discussion forums: Reddit, Quora
- 4) Bookmarking & Content curation networks: Pinterest, Flipboard
- 5) Consumer review networks: Yelp, TripAdvisor
- 6) Blogging and publishing networks: WordPress, Tumblr
- 7) Social shopping networks: Polyvore, Etsy
- 8) Interest-Based networks: Goodreads, Houzz

Each category has its own format of presenting their data such as short text or a long text representing with emoji's

## SENTIMENT ANALYSIS AND SPAM DETECTION

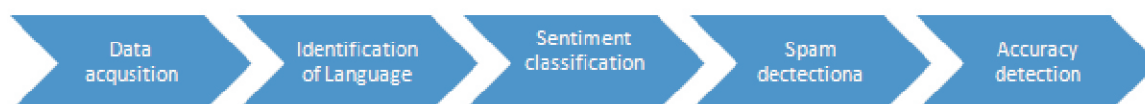
Sentiment analysis is the subset of the Natural Language Processing technique which has been used to analyze the sentiment of the given piece of text. It can be classified at three levels. They are document level, sentence level, aspect level (3) (4).

- Document level sentiment analysis –it classifies the opinionated document as single document on a whole with 2 levels of classification positive or negative.
- Sentence level sentiment analysis – it classifies individual sentences in a document. The first step is subjectivity classification, i.e., identifying a sentence is opinionated or not opinionated. If opinionated sentence, then classified as neutral, positive, negative.
- Aspect based sentiment analysis – it is used to extract and summaries the opinion of the people expressed on entities or features of entities.

Spam is an unsolicited, unwanted information received from unknown sources which is likely to rob the information of the users. The spammers are the person who does the above work intendedly to make loss to the user information, ISP's data, etc., Spam detection is the process of detecting the spam message or text to safeguard the assets of the users in the Internet environment. The detection process can be carried with various machine learning algorithms / classifiers to achieve the results. The performs of the algorithms can be analysis through the performance metrics accuracy, specificity, recall and F-measure.

## PROPOSED METHOD

The prominent growth of the above fields and techniques, we likely to propose an approach which will find the sentiment-based spam detection for code mixed data. The steps are as follows:



## CONCLUSION

The study has given the overview of the codemixing, sentiment analysis, social media classification and the proposed an approach based on the sentiment classification. This approach is a new approach to find how much percentage of the spam is they're in the text after the sentiment analysis.

- [2] "What are the different types of Social Media?" <https://www.digitalvidya.com/blog/types-of-social-media/> (accessed Dec. 25, 2020).
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— This marker is the beginning of the next newsletter, rather than the end. —