"Two Days Seminar on Artificial Intelligence and Machine Learning: An Application Prospective"

(5th March - 6th March, 2020)



Sponsored By: Rajiv Gandhi University, Doimukh

Organized By: Dept. of Electronics and Communication Engineering &

Dept. of Computer Science and Engineering



Submitted By:

Kurmendra,

Assistant Professor,

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Arunachal Pradesh, INDIA

March, 2020

Acknowledgements

Organizing Committee

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Acknowledgments

First of all, I am indebted to the GOD Almighty for giving me an opportunity to excel in my efforts to complete this seminar successfully.

I am extremely grateful to Prof. Saket Kushwaha, Hon'ble Vice-Chancellor, Rajiv Gandhi University for always encouraging and supporting to conduct these kinds of programs.

I feel honored and privileged to offer my gratitude to Hon'ble Chief Guest, Prof. H. S. Yadav, Director, Nerist and Prof. A. Mitra, Pro Vice-Chancellor, Rajiv Gandhi University for gracing the inaugural session.

My heartfelt gratitude to Prof. Pradip Kumar Kalita, Dean, Faculty of Engineering and Technology, Rajiv Gandhi University and Prof. Utpal Bhattachargee, Dept. of CSE, for thier support in conducting the seminar.

I express and acknowledge the support received from Mr. Jagdeep Rahul, Head(i/c), Dept. of ECE and Dr. Marpe Sora, Head(i/c), Dept. of CSE, Rajiv Gandhi University.

I express my heartfelt acknowledgment to all the resource persons who have visited and delivered their lectures.

I feel special by acknowledging the support received from Mr. Bhaskar Jyoti Chutia, Co-Convenor of the programme and Ms. Champa Tanga, Assistant Professor, Dept. of ECE while whole duration of the seminar.

I would like to acknowledge the Support of Guest Faculties, department of CSE and M. Tech. Students of ECE who have helped throughout the seminar.

I will be failing in duty if I do not acknowledge the support of Faculty members, Research Scholars, Students and staffs during seminar.

Thanking You
Kurmendra

Organizing Committee

Sr. No.	Dignitaries	Role	
1	Prof. Saket Kushwaha, Hon'ble Vice Chancellor, Rajiv Gandhi University, Doimukh	Chief Patron	
2	Prof. H. S. Yadav, Director , NERIST, Nirjuli.	Chief Guest	
3	Prof. A. Mitra, Pro- Vice Chancellor, , Rajiv Gandhi University, Doimukh		
4	Prof. Pradeep Kumar Kalita, Dean, Faculty of Engineering and Technology, Rajiv Gandhi University, Doimukh.		
5	Mr. Kurmendra, Assistant Professor, Department of Electronics & Communication Enigneering, Rajiv Gandhi University, Doimukh.	Convenor	
6	Mr. Bhaskar Jyoti Chutia, Assistant Professor, Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh.	Co-Convenor	
7/	Prof. Utpal Bhattacharjee, Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh.	Member	
8	Mr. Jagdeep Rahul, Assistant Prof. and Head, Department of Electronics & Communication Enigneering, Rajiv Gandhi University, Doimukh.	Member	
9 [Dr. Marpe Sora, Head(i/c) and Assistant Professor, Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh		
10	Mr. Ani Taggu, Associate Prof., Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh.	Member	
11	Mr. Firoz A, Assistant Professor, Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh.	Member	
12	Mr. Sikdar Md. Sultan Askari, Assistant Professor, Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh.		
13	Ms. Bomken Kamdak Bam, Assistant Professor, Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh.		
14	Mr. Satish Kumar Das, Assistant Professor, Department of Computer Science and Engineering, Rajiv Gandhi University, Doimukh.		
15	Mr. Maibam Sanju Meetei, Assistant Professor, Department of Electronics & Communication Enigneering, Rajiv Gandhi University, Doimukh.	Member	
16	Ms. Champa Tanga, Assistant Professor, Department of Electronics & Communication Enigneering, Rajiv Gandhi University, Doimukh.	Member	

1.1 Background

Machine learning and artificial intelligence has become much popular technologies for humans. Artificial Intelligence (A.I.) is a multidisciplinary field whose goal is to automate activities that presently require human intelligence. Recent successes in A.I. include computerized medical diagnosticians and systems that automatically customize hardware to particular user requirements. The major problem areas addressed in A.I. can be summarized as Perception, Manipulation, Reasoning, Communication, and Learning. Perception is concerned with building models of the physical world from sensory input (visual, audio, etc.). Manipulation is concerned with articulating appendages (e.g., mechanical arms, locomotion devices) in order to affect a desired state in the physical world. Reasoning is concerned with higher level cognitive functions such as planning, drawing inferential conclusions from a world model, diagnosing, designing, etc. Communication treats the problem understanding and conveying information through the use of language. Finally, Learning treats the problem of automatically improving system performance over time based on the system's experience. Many important technical concepts have arisen from A.I. that unify these diverse problem areas and that form the foundation of the scientific discipline. Generally, A.I. systems function based on a Knowledge Base of facts and rules that characterize the system's domain of proficiency. The elements of a Knowledge Base consist of independently valid (or at least plausible) chunks of information. The system must automatically organize and utilize this information to solve the specific problems that it encounters. This organization process can be generally characterized as a Search directed toward specific goals. The search is made complex because of the need to determine the relevance of information and because of the frequent occurrence of uncertain and ambiguous data. Heuristics provide the A.I. system with a mechanism for focusing its attention and controlling its searching processes. The necessarily adaptive organization of A.I. systems yields the requirement for A.I. computational Architectures. All knowledge utilized by the system must be represented within such architecture. The acquisition and encoding of real-world knowledge into A.I. architecture comprises the subfield of Knowledge Engineering.

Machine learning has been central to AI research from the beginning. Unsupervised learning is the ability to find patterns in a stream of input. Supervised learning includes both classification and numerical regression. Classification is used to determine what category something belongs in, after seeing a number of examples of things from several categories. Regression takes a set of numerical input/output examples and attempts to discover a continuous function that would generate the outputs from the inputs. In reinforcement learning the agent is rewarded for good responses and punished for bad ones. These can be analyzed in terms of decision theory, using concepts like utility. The mathematical analysis of machine learning algorithms and their performance is a branch of theoretical computer science known as computational learning theory.

1.2 Objective

The Key objectives of the seminar are:

To provide a platform for participants to discuss on Aritifical Intelligence and Machine learning with basics and Advance prospective

To explore the opportunities and Challenges in the area of Artificial Intelligence and Machine learning to offer insights into exciting advancements in technology.

The real world implementation of AI and explore how they have changed our lives.



1.3 Brief About Convener and Co-convener



Convener

Mr. Kurmendra is working as Assistant Professor in the Department of Electronics and Communication Engineering of Rajiv Gandhi University (A Central University), Doimukh, Itanagar. He has received his Bachelor of Technology degree in ECE from Uttar Pradesh Technical University, Lucknow, Uttar Pradesh in year 2012 and Master of Technology degree in Microelectronics & VLSI Design from NIT, Silchar, Assam in year 2015. He has served as Guest Faculty in the department of Electronics & Communication, MNNIT, Allahabad, India from July, 2015 to February, 2016. He has also served as JRF in Electronics Engineering Department, IIT(ISM) Dhanbad. He was conferred to "Outstanding Presenter Award" for his paper presentation in the international conference on Emerging Electrical energy, Electronics and Computing technologies 2019 (ICE4CT-2019)

Email Id: kurmendra@rgu.ac.in, Mo. No. 9415131799



Co-Convener

Mr. Bhaskar Jyoti Chutia is working as Assistant Professor in the Department of Computer Science and Engineering of Rajiv Gandhi University (A Central University), Doimukh, Itanagar. He has received his Bachelor of Engineering degree with honours in CSE from Gauhati University, Guwahati, Assam in the year 2011. He completed his Master of Technology degree in Information Technology from Tezpur University, Tezpur, Assam in year 2013. He has served as Guest Faculty in the Department of Computer Science and Engineering, NERIST, Nirjuli, Arunachal Pradesh from January 2014 to May 2014.

Email Id: bhaskar.chutia@rgu.ac.in, Mo. No. 9365547945

1.4 Resource Persons

Dr. AHEIBAM DINAMANI SINGH, Associate Professor, NIT Manipur



Dr. AHEIBAM DINAMANI SINGH received the B.Tech. degree in Electronics and Communication Engineering from North Eastern Hills University NEHU Shillong, India, in 2004. And received the M.Tech. and Ph.D. degree in Electronics and Communication Engineering from the North Eastern Regional Institute of Science and Technology, NERIST, Nirjuli, Arunachal Pradesh, India, in 2010 and 2015 respectively. He was working as a faculty in the Department of Electronics and Communication Engineering, NERIST from 20/06/2006 till 07/01/2020.He is currently working as an Associate Professor in the Department of Electronics and Communication Engineering, at the National Institute of Technology, Manipur, India. His research interests are in the field of Artificial Intelligence, wireless communication, Fading Channels, Image Processing, Fuzzy Logic, Signal Processing, Antennas array, and Millimeter-wave antennas. He has published over 55 scientific papers in research journals, international and national conferences. He has served as the organizing Chair of the International Conference on Computers and Management Skills (ICCM) 2019. He was awarded Child Scientist Award 1995 by NCSCT Network Ned Delhi and Conferred Bal Shree Award for Creative Scientific Innovations 1997 by the then President of India Dr. K. R. Narayanan at the Rashtrapati Bhavan.

Email Id: aheibamdina@yahoo.co.in, Mo. No. 9436632958

Dr. Sanasam Ranbir Singh, Associate Professor, IIT Guwahati



He was born in Imphal (East), Manipur to Sanasam (Ongbi) Ibemhal Devi and Sanasam Khomei Singh. Currently, He is working an Associate Professor in the Department of Computer Science and Engineering, Indian Institute of Technology Guwahati. He has received His Ph.D from Indian Institute of Technology Madras. During his Ph.D

program, he was supported by IBM PhD Fellowship Award (a world wide competition).

Besides this he has won following awards

- NEC merit Scholarship -- 1994 to 2000
- Microsoft Young Faculty Award 2011
- Hockey, representing Arunachal Pradesh (Bronze Medal winner) in the XII North Eastern Sport Festival,
 Sports Authority of India

He works in the area of Information Retrieval especially on the core issues of Web Search Engine customization. As a part of his Ph.D, he worked on the problems related to modeling of Web Page Updates, designing different Text classification frameworks suitable for Web document classification and effect of real time implicit feedback on Search Results customization. His research interest includes machine learning, data mining and complex network analysis (for social network in particular).

Email Id: ranbir@iitg.ac.in, Mo. No. 9678007013

Prof. Kandarpa Kumar Sarma, Professor, Gauhati University



Kandarpa Kumar Sarma is professor and head, Department of Electronics and Communication Engineering at Gauhati University. His research interests include soft-computation and its applications, mobile communication, antenna design, speech processing, document image analysis, and signal processing applications in high-energy physics, neuro-computing, and computational models for social science applications. Prof. Sarma received his MTech degree in signal processing and his PhD in mobile communication from the Indian Institute of Technology Guwahati (IITG), Guwahati, Assam, India. He also completed Post Doc research from Technical University Sofia, Bulgaria in 2015. He is a Senior Member of IEEE, a Fellow of the Institution of Electronics and Telecommunication Engineers in India, a member of the International Neural Network Society, a Life Member of the Indian Society for Technical Education, and a Life Member of the Computer Society of India.

feature extraction, learning (artificial intelligence), mean square error methods, multilayer perceptrons, neural nets, backpropagation, human computer interaction, image segmentation, interference suppression, natural

language processing, pattern classification, speech processing, speech recognition, wireless channels.

He serves as an Editor-in-Chief of International Journal of Intelligent System Design and Computing (IJISDC, UK), guest editor of several international journals, reviewer of over thirty international journals and over hundred fifty international conferences.

Email Id: Mo.kandarpaks@gauhati.ac.in, No. 9401454994

Dr. Shobhanjana Kalita, Assistant Professor, Tezpur University



She did her B. Tech in Computer science and Engineering, M.Tech in Information technology from the Computer science and Engineering Departmennt of Tezpur Central University, Assam. She did her Phd in Knowledge representation and reasoning under the guidance of Prof. Shyamanta Mani Hazarika who is currently a professor of mechanical engineering at IIT Guwahati. Madam is working as Assistant Professor in Computer science and Engineering Department at Tezpur Central University Since 2015.

She works in the field of Artificial Intelligence specifically in Knowledge representation and reasoning.

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1.5 About the Sponsoring Agency

Rajiv Gandhi University (Formerly Arunachal University) is the Premier institution for Higher education in the state of Arunachal Pradesh. The University got academic recognition under section 2(f) from the University Grant Commission on 28th March 1985 and started functioning from 1st April 1985. It got financial recognition under section 12-B of the UGC on 25th March, 1994. Since then Rajiv Gandhi University has carved a niche for itself in the educational scenario of the country following its selection as a university with potential for excellence by a high level expert committee of University Grant Commission among universities in India. The university was converted into a central university with effect from 9th April 2007 as per the notification of Ministry of Human Resource Development (MHRD), Government of India. The University is located at the top of Rono hills on a picturesque tableland of 302 acres overlooking the rive Dikrong. It is 6.5 Kms away from the national highway 52-A and 25 kms way from Itanagar, the state capital.



1.6 Budget and Expenditures

Proposed Budget

Sr. No.	Particulars Particulars Particulars	Estimated Expense
1	TA and DA for the Experts from Outside	50,000/-
2	Accommodation for Experts and outside participants (Lodging & Fooding)	12,000/-
3	Lunch/Dinner/Tea/Snacks	55,000/-
4	Stationary items including Kits for Participants	10,000/-
5	Banner, poster and invitation	10,000/-
6	Memento, certificate and gift for Felicitation of experts and dignitary etc.	10,000/-
7	Miscellaneous (local travel etc.)	10,000/-
	Total	1,57,000/- (One Lac fifty-seven thousand only)

Expenditure on Resource Persons for TA, DA, Honorarium and Accommodation

Sr. No.	Details of the Resource Persons	Total Amount paid	Remarks
1	Dr. Aheibam Dinamani Singh, NIT Manipur	16162/-	TA, DA and
	06	7 1 1 4	Honorarium
2	Dr. Sanasam Ranbir Singh <mark>, IIT Gu</mark> wah <mark>a</mark> hti	6890/-	TA, DA and
	- 1011	MU YI	Honorarium
3	Dr. Shobhanjana kalita, Tezpur University	12920/-	TA, DA and
	14374 11		Honorarium
4	Prof. Kanarpa Kumar Sarma, Gauhati	7420/-	TA, DA and
	University	THE PERSON NAMED IN	Honorarium
5	Accommodation At NERIST Guest house	8000/-	Accommodation
Total Amount Paid		51,392/-	1
		(Fifty-One Thousand Three hundr	ed ninety-Two)

Expenditure on Miscellaneous Items other than TA/DA/Honorarium/Accommodation

Sr. No.	Items	Total Amount Paid	Remarks, if Any
1	Petrol	2000/-	Arunachal Petroleum Depot, Nrjuli
2	Taxi Hired @ 2000/- per day for NERIST to RGU Movements	4000/-	Licha Taxi
3	Kaju Barfi	300/-	Nana's restaurant, Nirjuli
4	Oil, Candle, Diya Suta	70/-	M/S K. D. Store, Doimukh
5	Stationary items	10340/-	M/S T. K. Enterprises, Doimukh
6	Cookies	200/-	TNT Shilpa Bakery
7	Water bottle (Cello)	660/-	M/S Pang Enterprises, Nirjuli
8	Memento (10 pcs.)	8700/-	M/S Growmore trophy house, Naharlagun
9	Pomo Muflar (20 pcs.)	2000/-	OJU Craft Centre, Naharlagun
10	Refreshments, High tea (02 times), Lunch for 05/03/2020	32400/-	Durga Hotel, Nirjuli
11	High Tea (02 times) and Lunch for 06/03/2020	24900/-	Durga Hotel, Nirjuli
12	Miscellaneous items	1540/-	M/S VIVCON, Doimukh
13	Banners, Certificates, pamphlets, Memento Pasting Charge	14320/-	M/S Growmore Media house
14	Flower Pot and Plants @ 8pcs.	4000/-	M/S A. C. Nurssary, Naharlagun
	Total Amount Paid	YLAN	105430/-
1. As 18 11 V		(One lak	h five thousand four hundred thirty Only)

Total Expenditure = 156822/- (One lakh fifty-six thousand eight hundred twenty-two only)

Part: 2 Session Wise Details

2.1 Inaugural Session

The Inaugural session of the programme was graced by Hon'ble Chief Guest, Prof. H. S. Yadav, Director NERIST, Pro Vice Chancellor, Prof. Amitava Mitra, Rajiv Gandhi University, Dean of the Faculty of Engineering and Technology, Prof. Pradip Kumar Kalita, Head (i/c), Department of Computer Sciecne and Engineering, Dr. Marpe Sora, Head(i/c), Department of Electronics and Communication Engineering, Mr. Jagdeep Rahul and Prof. Utpal Bhattachargee, Professor, Department of Comuputer Science and Engineering. Resource Persons for Technical sessions of the Day-1 and Day-2, Dr. Aheibam Dinamani Singh, Associate Professor, NIT, Manipur and Dr. Sanasam Ranbir Singh, Associate Professor, IIT Guwahati and Prof. Kandarpa Kumar Sarma, Professor, Gauhati University were also present for Gracing inaugural Session of the Programme.



Lighting of Ceremonial lamp by Chief Guest, Prof. H. S. Yadav, Director, NERIST(Left) and Pro Vice Chancellor, Prof. A. Mitra, RGU (Right)

The Faculty members from different departments of Rajiv Gandhi University and NERIST were present. The Research Scholars from RGU & NERIST, Students of M.Tech(ECE), M.Tech(CSE), MCA and BCA and non-teaching staffs of ECE and CSE were also present.





Felicitation of Dignitaries (Left) and Welcome address by Mr. Kurmendra, Convener (Right)

The inaugural session was started by Lighting of Ceremonial Lamp by Hon'ble Chief Guest, Prof. H. S. Yadav, Director, NERIST, Pro Vice Chancellor, Prof. Amitava Mitra, Rajiv Gandhi University, Dean of the Faculty of Engineering and

Technology, Prof. Pradip Kumar Kalita, Head (i/c), Department of Computer Sciecne and Engineering, Dr. Marpe Sora, Head(i/c) and the Convener.

The Felicitation of the Chief Guest, Pro Vice Chancellor, Dean of Faculty of Engineering and Technology, Head of the departments of ECE and CSE, Resource persons from different institutes was gracefully done by Faculty members of both the departments.

Convener of the Programme, Mr. Kurmendra, welcomed the Chief Guest and other dignitaries sitting on the dais and off the dais along with participants, non-teaching staffs and resource person for media coverage from department of Mass Communication.

Dr. Marpe Sora, Head (i/c), Department of Computer Science and Engineering, Spoke on introductory notes of the seminar and gave a brief idea about technical sessions.

Dr. Sanasam Ranbir Singh, Resource person for technical session -2, Spoke that Artificial Intelligence is very important for solving problems associated with any disciplines there is no area left which cannot use the Artificial Intelligence and Machine learning for providing solutions.



Dr. Sanasam Ranbir Singh, IIT Guwahahti, Resource person for technical session -2(Left) and Prof. Pradip Kumar Kalita, Dean, Faculty of Engineering and Technology(Right) addressing participants.

Prof. Pradip Kumar Kalita, Dean, Faculty of Engineering and Technology, said that the theme of the seminar can be considered so carefully chosen theme by the Organising team. He discussed various aspects of Artificial intelligence and Machine learning and its application around the world.

Pro Vice Chancellor, Prof. Amitava Mitra, said that the technology plays a very important role in the development and growth of economy of any country. He gave examples of Germany and China countries while stating that science and technology can only bring the growing economy and development in a country. He said one of the latest technologies is the artificial intelligence in Computer Science and Electronic discipline. He concluded his speech by stating that this seminar will be helpful for faculty members and participants and they will come up with innovative ideas and projects.



Chief Guest, Prof. H. S. Yadav, Director, NERIST(Left) and Pro Vice Chancellor, Prof. A. Mitra, RGU (Right) addressing participants.

Hon'ble Chief Guest, Prof. H. S. yadav, Director, NERIST said that Artificial Intelligence is a technique where humans guide and programme the machines to behave in a intelligent way. While speaking about the technological development made by European Countries, United Nations or by other countries of the world are for their own nation growth. He said that technology should be made for the peoples of remote areas who think that we as, a scientist, a professor, an engineer will make technology available for them. He encouraged youths participating in the seminar to think about using Artificial Intelligence systems in the field of Agriculture and Choose agriculture as a career for research and job.



Mr. Bhaskar Jyoti Chutia, Co-convener, while presenting vote of thanks(Left) and National Anthem by participants and delegates (Right).

Co-convener of the programme, Mr. Bhaskar Jyoti Chutia, presented vote of thanks to all the dignitaries for gracing the inaugural session and participants for attending the inaugural session.

The Inaugural session was ended by National Anthem.

2.2 Technical Sessions

The technical session -I "Introduction to Artificial Intelligence" was delivered by resource person Dr. Aheibam Dinamani Singh, Associate Professor, Department of Electronics and Communication Engineering, NIT, Manipur, India. He discussed Artificial intelligence and about the domains where AI based technological devices being used.



Dr. Aheibam Dinamani Singh, Resource person for Technical Session-1 delivering his lecture.

Technical Session- II "Machine learning on Graph- Network Embedding" was taken by Dr. Sanasam Ranbir Singh, Associate Professor, Department of Computer Science and Engineering, Indian Institute of Technology (IIT) Guwahati. His discussions were involved on to the use of Artificial intelligence and Machine Learning on social platforms and discussed algorithms which can be used to make graphs for analysis of data collected from these social platforms.



Dr. Sanasam Ranbir Singh, Resource person for Technical Session-II delivering his lecture.

Technical Session-III "Searching for Intelligent Solutions" was delivered by Dr. Shobhanjana Kalita, Assitant Professor, Department of Computer Science and Engineering, Tezpur University, Assam. Her speech was focused on developing intelligent algorithms for solving real time problems using Artificial intelligence techniques. The creation and application of the intelligent algorithm for Computer and machines can be developed by human intelligence techniques.



Dr. Shobhanjana Kalita, Resource person for Technical Session-III delivering his lecture.

Technical Session-IV "Building Deep learning Networks" was delivered by Prof. Kandarpa Kumar Sarma, Professor, Department of Electronics and Coomunication Engineering, Gauhati University, Guwahati. His talk was based on building up leaning networks for machines using Artificial intelligence and Machine learning. He enumerated various concepts such as Mathematical preliminaries for neural networks, ANN linkage to machine learning, Convolutional neural networks and applications of artificial neural networks.



Prof. Kandarpa Kumar Sarma, Resource person for Technical Session-IV delivering his lecture.

2.3 Valedictory Session

Valedictory session of two days programme was started by felicitating the dignitaries on the dais: Prof. Pradip Kumar Kalita, Dean, faculty of Engineering and technology, Prof. Utpal Bhattachargee, Department of CSE, Prof. Kanarpa Kumar Sarma, Resource person and Professor, Gauhati University, Mr. Jagdeep Rahul ,Head(i/c), Department of ECE.



Mr. Jagdeep Rahul (Head(i/c), ECE), Prof. K. K. Sarmay (Resource Person), Prof. P. K. Kalita (Dean), Prof. Utpal Bhattachargee and Kurmendra (Convener).

In his valedictory speech convener, Mr. Kurmendra spoke about purpose of conducting seminar is to get ready with the Artificial intelligence technologies and use them for betterment of life in Arunachal Pradesh and India as whole.

In his speech co-convener, Mr. Bhaskar Jyoti Chutia spoke that Artificial intelligence is making contribution in everyone's life for betterment and wellness of society; it is need of the hour to adopt AI and Machine learning.

Dean, Faculy of Engineering and Technology, Prof. Pradip Kumar Kalita congratulated convener and his team for successfully organizing a seminar on the topic which is most relevant for today's need.

Professor Utpal Bhattacharjee of Computer science and Engineering said that a smart society needs intelligence systems which can only be achieved by application of Artificial Intelligence and Machine Learning.

Invited speaker, Professor Kandarpa Kumar Sarma, Gauhati University said these kinds of seminars should be arranged to benefit the students and society and congratulated members for grand success of the seminar.

After Valedictory speeches, certificate of Appreciation to the organizing team and certificate of participation were given to all the participants present during valedictory session including faculty members, scholars and students of M.Tech, MCA and BCA.

Mr. Jagdeep Rahul, HoD, Department of Electronics and Communication concluded the programme by mentioning the efforts made by each one of the organizing members including faculties and students, Guests and participants from RGU and outside.





Prof. P. K. Kalita (Dean) giving certificate to Faculty members





Prof. Utpal Bhattachargee giving certificate to the M.Tech (ECE) students





Prof. K. K. Sarma (Resource Person) giving certificate to the M.Tech (CSE) students

Part: 3 Outcome of the Programme

Learning Outcomes:

The Participants were introduced to Artificial Intelligence and Computer vision where they learned basics aspects of Artificial Intelligences and its applications.

The Participants were also exposed to Network Embedding concepts using Machine Learning where they learned about various encoding and decoding techniques on Social Networking platforms using Machine learning approach. They are also provided with key points for making solutions of problems in a intelligent way using Artificial Networks and beside this the participants learned about how to build up deep learning networks for development of Al systems.

The other Outcomes of this programme are:

After attending this seminar, faculties, Research scholars and Students have been equipped with a strong basics and innovative ideas in the domain of Artificial Intelligence and Machine learning which will help Faculties to carry out research in Al and its sub field. Research Scholars and Master degree students will be able to take projects in Al and ML.

The Department of Electronics & Communication Engineering and Department of Computer Science & Engineering will come up with new Certificate Course in Al and ML in future for M.Tech and MCA students.

Both departments are also thinking of bringing out a new subject on Artificial Intelligence and Machine learning for their students.

Dr. Sanasam Ranbir Singh (Resource Person for Technical Session -2), IIT Guwahati have suggested to send a few of our students for doing internship in Artificial Intelligence and Machine Learning at IIT Guwahati under his mentorship.

ANNEXURE-I Inaugural Session and Technical Session Details

Inaugural Session (Day-1) 05.03.2020 (Thursday) Technical Session (Day-1) 05.03.2020 (Thursday) (Day-2) 06.03.2020 (Friday)

(09:00 A.M.- 10:00 A.M.)

Arrival of Delegates and Registration

(10:00 A.M.- 10:05 A.M.)

Welcome of the dignitaries on to the dais

(10:05 A.M.- 10:10 A.M.)

Lighting of Ceremonial lamp

(10:10 A.M.- 10:20 A.M.)

Felicitation of Dignitaries

(10:20 A.M.- 10:30 A.M.)

Welcome Address by Convenor, Mr. Kurmendra

(10:30 A.M.- 10:40 A.M.)

Introduction of the Seminar by Dr. Marpe Sora, HoD(i/c) CSE

(10:40 A.M.- 10:50 A.M.)

Address by Dean, Prof. P. K. Kalita Faculty of Engineering and Technology

(10:50 A.M.- 11:00 A.M.)

Address by Registrar (i/c), Prof. Tomo Riba,

(11:00 A.M.- 11:10 A.M.)

Address by Chief Guest Prof. H. S. Yadav, Director, NERIST, Nirjuli

(11:10 A.M.- 11:20 A.M.)

Address by
Prof. Amitava Mitra,
Pro-Vice Chancellor,
Rajiv Gandhi University

(11:20 A.M.- 11:25 A.M.)

Vote of Thanks

(11:25 A.M.- 11:30 A.M.)

National Anthem

(11:30 A.M. - 11:35 A.M.)

High Tea Break

Day-1, 11:35 A.M. - 01:15 P.M.

Technical Session - 1

By Dr. Aheibam Dinamani Singh, Associate Professor, NIT , Manipur

"Artificial Intelligence and Vehicle Detection"

Day-1, 02:00 P.M. - 04:00 P.M.

Technical Session-2

By Dr. Sanasam Ranbir Singh, Associate Professor, IIT Guwahati

on

"Application of Machine learning on Graph"

Day-2, 10:00 A.M. - 12:00 P.M.

Technical Session-3

By Dr. Shobhanjana Kalita, Assistant Professor, Tezpur University

on

"Searching for Intelligent Solutions on Artificial Intelligence"

Day-2, 12:<mark>20 P.M. - 01:20 P.M.</mark>

&

02:00 P.M.- 03:00 P.M.

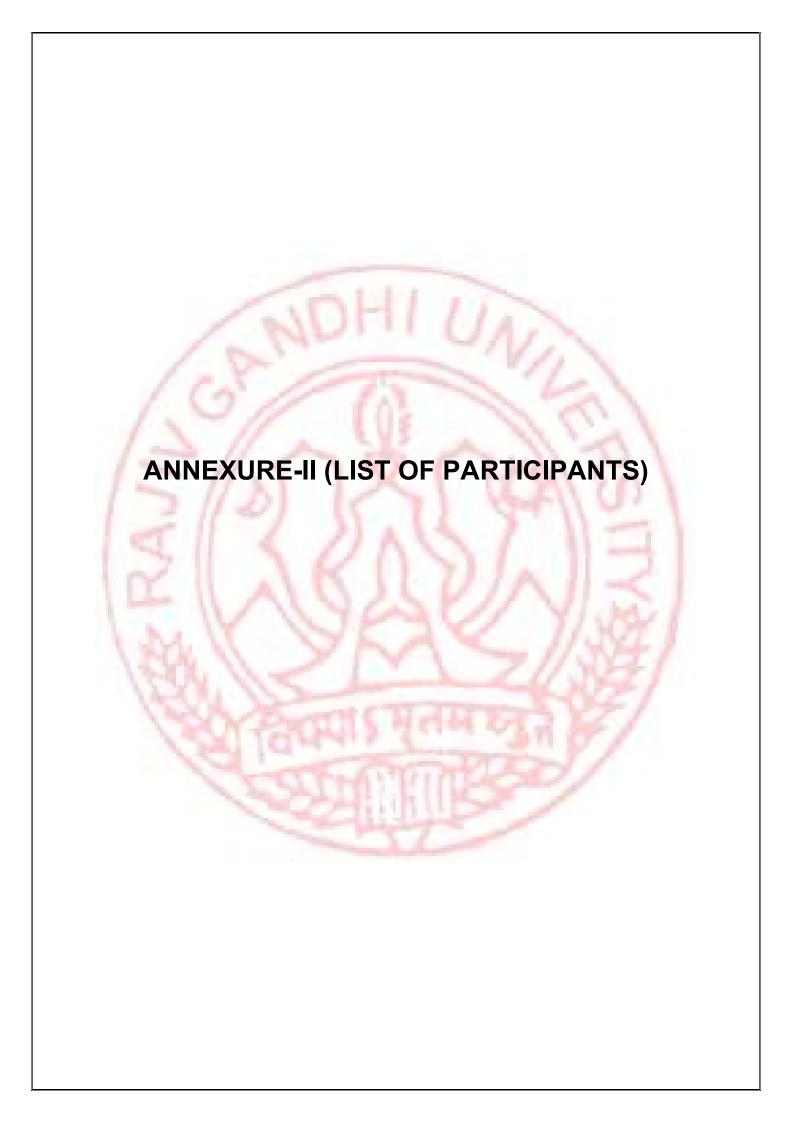
Technical Session- 4

By Prof. Kandarpa Kumar Sarma,

Professor, Gauhati University

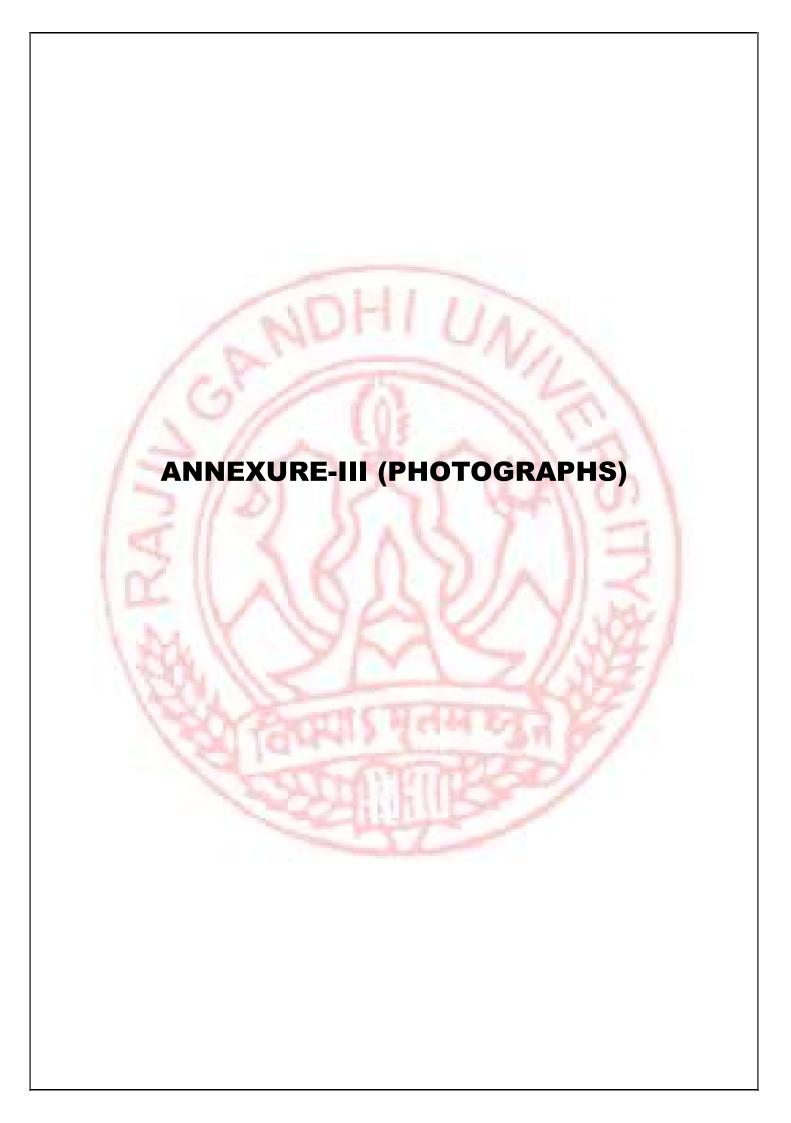
on

"Building Blocks of Deep Neural Networks"



SLNo	Name	Category	Institution
1	Utpal Bhattacharjee	Faculty	RGU
2	Marpe Sora	Faculty	RGU
3	Satish Kumar Das	Faculty	RGU
4	Firos A	Faculty	RGU
5	Sikdar Md. Sultan Askari	Faculty	RGU
6	Bhaskar Jyoti Chutia	Faculty	RGU
7	Bomken Kamdak Bam	Faculty	RGU
8	Jagdeep Rahul	Faculty	RGU
9	Maibam Sanju Meetei	Faculty	RGU
10	Champa Tanga	Faculty	RGU
11	Kurmendra	Faculty	RGU
12	Jowa Yangchin	Faculty	RGU
13	Aditya R Pillai	Faculty	RGU
14	Bornali Baruah	Faculty	RGU
15	Phemai Wangsu	Faculty	RGU
16	Roshan Adhikari	Faculty	RGU
17	Alok Kumar	Faculty	RGU
18	Ajit Kr. Singh Yadav	Faculty	NERIST
19	Ravi Ranjan Kumar	Faculty	RGU
20	Gom Taye	Research Scholar	NIT, Yupia
21	Mrinal Jyoti Sarma	Research Scholar	RGU
22	Tamchi Yani	Research Scholar	RGU
23	Lobsang Darge	Research Scholar	RGU
24	Lakshipriya Gogoi	Research Scholar	NERIST
25	Hage Nomo	MTech(CSE) 4th	RGU
26	Radhe Tamu	MTech(CSE) 4th	RGU
27	Tanmoy Protim Buraghohain	MTech(CSE) 4th	RGU
28	Mintu Das	MTech(CSE) 2 nd	RGU
29	Yaagam Bogo	MTech(CSE) 2 nd	RGU
30	Partha Protim Saikia	MTech(CSE) 2 nd	RGU
31	Simanta Saikia	MTech(CSE) 2 nd	RGU
32	Ome Moyong	MTech(ECE) 4th	RGU
33	Tana Bapu	MTech(ECE) 4th	RGU
34	Bikash Chetry	MTech(ECE) 4th	RGU
35	Chaw	MTech(ECE) 4th	RGU
36	Nyapu	MTech(ECE) 2 nd	RGU
37	Rakesh Sharma	MTech(ECE) 2 nd	RGU
38	Bhabesh Kumar Das	BCA 6 th	RGU
39	Bharti Mishra	BCA 6 th	RGU
40	Lapsang Lama	BCA 6 th	RGU
41	Chow Chandawon Mannow	BCA 6 th	RGU
42	Mimo Gibi	BCA 6 th	RGU
43	Pawan Kumar	BCA 6 th	RGU
44	Priyanka Yadav	BCA 6 th	RGU
45	Sujit Mondol	BCA 6 th	RGU

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46	Sumit Kumar	BCA 6 th	RGU
47	Tage Bambi	BCA 6 th	RGU
48	Arup Basumatary	BCA 4 th	RGU
49	Bivash Singh	BCA 4 th	RGU
50	Amha V Richa	BCA 4 th	RGU
51	Nabam Rikum	BCA 4 th	RGU
52	Nandita Das	BCA 4 th	RGU
53	Tari Nako	BCA 4 th	RGU
54	Oyimang Tatin	BCA 4 th	RGU
55	Saurav Singh	BCA 4 th	RGU
56	Kago Moda	BCA 4 th	RGU
57	Bamin Tamer	BCA 4 th	RGU
58	Atul Pachani	MCA 4 th	RGU
59	Bego Royi	MCA 4 th	RGU
60	Boikuntha Bharali	MCA 4 th	RGU
61	Dikruk Raji	MCA 4 th	RGU
62	Dipankar Kakoti	MCA 4 th	RGU
63	Manjil Deuri	MCA 4 th	RGU
64	Manuranjan Chutia	MCA 4 th	RGU
65	Md Shahil Ahmed	MCA 4 th	RGU
66	Mukunda Madhab Bora	MCA 4 th	RGU
67	Nenem Talom	MCA 4 th	RGU
68	Pranab Bora	MCA 4 th	RGU
69	Pulak Sarmah	MCA 4 th	RGU
70	Tsering Dhundop	MCA 4 th	RGU
71	Kingshuk Sonowal	MCA 2 nd	RGU
72	Payel Sarmah	MCA 2 nd	RGU
73	Bandana Newar	MCA 2 nd	RGU
74	Tage Tamin	MCA 2 nd	RGU
75	Bishal Sarma	MCA 2 nd	RGU
76	Chow Vishal Longchat	MCA 2 nd	RGU
77	Bamin Tale	MCA 2 nd	RGU
78	Chow Cheyaseng Khen	MCA 2 nd	RGU
79	Nisha Bharti Sah	MCA 2 nd	RGU
80	Sirnajib Saha	MCA 2 nd	RGU
81	Gyamar Guma	MCA 2 nd	RGU
82	Julie Doley	MCA 2 nd	RGU
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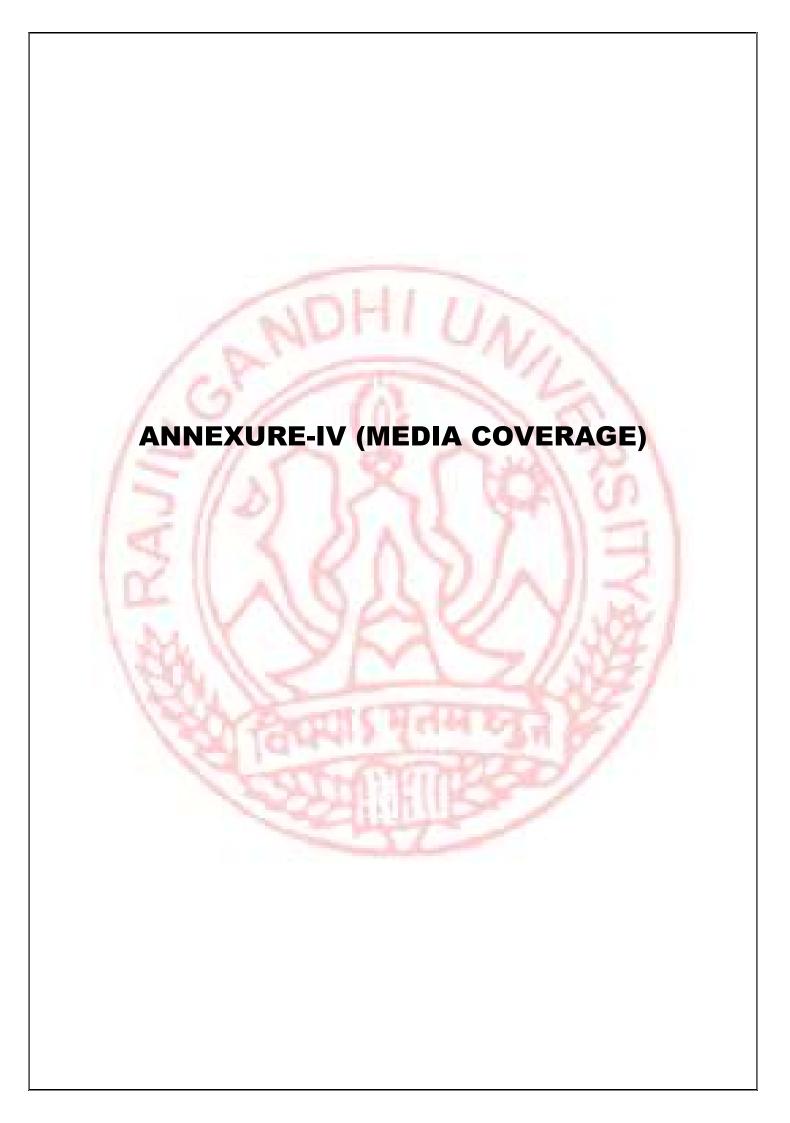












Day-1 Media Coverage		
https://arunachaltimes.in/index.php/2020/03/06/seminar- on-ai-underway-at-rgu/	The Arunachal Times	
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http://www.thearunachalpioneer.com/Arunachal- Pradesh/Seminars-on-Al-challenges-for-indigenous- cultures-conclude/11/5683/f/	Arunachal Poineer	
https://thedawnlitpost.com/seminar-on-ai-machine-learning-concludes/	The Dawnlit Post	

Page 3

in-charge, CSE shed light on different aspects of artificial

started at the Dept of Computer Science and Engineering, Rajiv Gandhi University today INO HILLS, Mar & A two-day seminar on 'artificial intelligence and machine learning

ring as chief guest on the occasion, Director NERIST Prof H S Yadav emphasized on

machine learning begins Seminar on AI and

register any win.

10do Ota F.C. will face table Bamang Taji F.C. in the sec-Echo of Arunacha

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IIT's CSE department pre-sented a brief on Al and Singh from the Guwahati Dr Sanansam Ranbir

different aspects of AL. Marpe Sora, enumerated CZE Head (in-charge), Dr nology related to AI, and mar Kalita, dwelt on techmachine learning.

Engineering & Technology Dean, Prof Pradip Ku-

world. nological countries in the how AI can be used to make India one of the best techlor, Prof A Mitra, spoke on "the importance of AI and RGU Pro-Vice-Chancel-

science & engineering de-partment of Rajiv Gandhi University (RGU) here on 5 derway at the computer machine learning' got uncial intelligence (AI) and two-day seminar on artifi-RONO HILLS, Mar 5: A

ral session, NERIST Director, Professor HS Yadav, em-Ш Addressing the inaugu-

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".notion." agriculture, and advised the young participants to "choose agriculture as a phasized on the use of Al in Seminar on Al underway at RGU

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Persuasion efforts por

səpnjəuoə RGU'S AI & ML seminar

versity underscored the need of these seminars to benefit achieved by application of Al & ML. Invited speaker. Professor Kandarpa Kumat Sama from Guwahati University and Sama from Sama systems which can only be

tronics and & Communica-tion lagdeep Rahul com-mended the efforts made by the students and society.

HoD, Department of Elec-

the seminar successful. RGU

Utpal Bhattacharjee of Computer Science & Engineer ing Department said a smart all stakeholders in making

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team for successfully organizing the seminar Professor Dean, Faculty of Engineer-ing and Technology Professor Pradip Kumar Kalita congrat-ulated the Convener and his

society needs intelligence

and Machine Learning: An Application Prospective concludes in RGU

Seminar on Artificial intelligence

in Armachal Pradesh and In-dia as a whole. Co-convener Bhaskar Jyou Chuia opined that need of the hour is to adopt AI and ML.

and Department of Computer Science & Engineering con-Iwo-day seminar on A nificial Intelligence (Al) and Machine Learning (ML) organized by RGL's Department of Electronics & Communication and Intelligence of the Communication of t RONO HILLS, Mar 6: The

Al technologies and use them for betterment of life Convener Kurmendra said the purpose of the seminar was to get accustomed with cluded here on Friday.

In his valedictory speech.

people

RONO HILLS, Mar 6: The two-day seminar on 'artificial intelligence (A1) and machine learning', organized jointly by Rajiv Gandhi University's (RGU) electronics & communication and computer science & engineering departments, concluded here on Friday. RGU seminar on Al concludes

the contribution of Al in making life easier and said "it is try, while co-convener Bhaskar Jyoti Chutia underscored convenor, Kurmendra, spoke about using AI technology to better the lives of the people of the state and the coun-Addressing the valedictory function, the programme's the need of the hour to adopt AI and machine learning.

jee said "a smart society needs intelligence systems which can only be achieved by application of artificial intelli-Engineering & Technology Dean, Prof Pradip Kumar Kalita, stressed on the relevance of the topic, and Computer Science & Engineering Professor Utpal Bhattachar-

Gauhati University Professor Kandarpa Kumar Sarma and RGU's Electronics & Communication HoD, Jagdeep gence and machine learning. Rahul, also spoke.

RNI NO 40909/89 Postal Regn. No. AR-1/6/91 enough measures to win the confidence of the SATURDAY, MARCH 7, 2020 Al Development Hub

/isit us at www.arunachaltimes.in

Seminars on AI, challenges for indigenous cultures conclude

RONO HILLS, Mar 06: The two-day seminar on artificial intelligence (AI) and machine-learning organised by the depart-ment of electronics and communication along with the department of computer science and engi-neering of Rajiv Gandhi University concluded here

on Friday. In his valedictory Convener speech, Kurmendra said the purpose of conducting the seminar was to get ac-

quainted with the artificial intelligence technologies and use them for betterment of life in Arunachal Pradesh and India as whole.

Co-convener Bhaskar Jyoti Chutia said artificial intelligence is making a contribution in everyone's life for the wellness of society and that the need of the hour is to adopt Al and

machine-learning.
Dean, Faculty of Engineering and Technology,
Pradip Kumar Kalita congratulated Kurmendra and

his team for successfully

his team for successfully organising a seminar on the "most relevant" topic today. Professor Utpal Bhattacharjee of CSB said that a smart society needs intelligence systems which can only be achieved by application of AI and machine-learning. Invited speaker, Pro-Invited speaker, Professor Kandarpa Kumar

Sarma of Gauhati University said such seminars should be arranged to benefit the students and society.

computer steines and engineering. Raily Coardin
university, concludes here
on Friday
In his convener
Specific Convener
Surmendra said the purpose of conducting seninal isto get ready with the
Artificial melligence technologies and use them for
betterment of life in

artificial intelligence and machine learning

eminar on day 07 March

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THE DAWNLIT POST

Seminar on Al & machine learning concludes

RONO HILL, Mar 6: Atwoday seminar on artificial in-telligence and machine learning organized by the department of Electronics and Communication along with the department of Computer Science and En

Kurmendra spoke about and machine learning" speech,

purpose of conducting the seminar was to get ready with the artificial intelligence technologies and use them for the katterment of the statement of th technologies and use them for the betterment of life in Arunachal Pradesh and India as a whole while co-convener, Bhaskar Jyoti Chutia Computer Science and Eligineering, Rajív Gandhi University, concluded here on Friday. on Friday.

In his valedictory and wellness of society, it is a society in a societ need of the hour to adopt Al

Professor need intelligence systems which can only be achieved by the application of Al and machine learning.

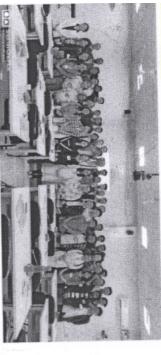
Invited speaker, Profes-sor Kandarpa Kumar Sarma, Gauhati University said such a seminar should be arranged to benefit the students and society.

Seminar on consumer rights held

ARUNACHAL OBSERVER

Artificial intelligence technologies improves life'

March 7, 2020



that their use would help lead better life, including in Arunachal RONO HILLS, Mar 06: Stressing on importance of artificial intelligence technologies, Guwahati University Prof Kandarpa Kumar Sarma said

intelligence and machine learning', organized by electronics and Rajiv Gandhi university here on Friday. communication and computer science & engineering departments of He was delivering valedictory speech to a two-day seminar on 'Artificial

Artificial intelligence is contribution in everyone's life for betterment said co-convener Bhaskar Jyoti Chutla, adding spoke that. for wellness of the society for which it is need of the hour to adopt it,

seminar on the topic which is most relevant for today. congratulated convener and his team for successfully organizing a

> which can only be achieved by applying the above. Justifying the theme, computer science and engineering Prof Utpal Bhattacharjee said that any smart society needs intelligence systems

also spoke, according to a RGU release. Dean (ET) Prof. Pradip Kumar Kalita and electronics HoD Jagdeep Rahul

Arunachal24.in

Application Prospective concludes in and Machine Learning: An Seminar on Artificial intelligence



