



**Atal Bihari Vajpayee Vishwavidyalaya,
Bilaspur (CG)**



**A Report
of
INTERNATIONAL WEBINAR SERIES
on**

Emerging techniques & It's Application

1st April – 14th May, 2023

Organized by

Department of Computer Science & Application

Supported by

THE GLOBAL KNOWLEDGE FOUNDATION INC. USA

Venue: Online Mode

Convenor

**Dr. H. S. Hota
Professor & HOD,
Department of CSA**

Co-ordinator

**Dr. Rashmi Gupta
Assistant Professor
Department of CSA**

The Department of Computer Science and Application organized an International Webinar Series on **Emerging Techniques and Its Application** from 1st April to 14th May 2023. The webinar series aimed to create awareness among students about emerging technologies and their applications. Emerging technologies are novel innovations that have the potential to disrupt traditional practices, improve efficiency, and create new opportunities for businesses and society as a whole. This report highlights a selection of prominent emerging technologies and their potential applications.

The event was supported by **The Global Knowledge Foundation Inc. USA**, a non-profit organization registered in the USA. The collaboration with this organization added value and credibility to the webinar series, enabling a broader reach and engagement with participants.

The webinar series featured 12 experts' from academia and industry from India and abroad who delivered talks on different topics related to advanced technologies. The event was attended by approximately 90 postgraduate students from the department, who actively participated in the sessions and engaged with the experts. They attended the sessions and interacted with the expert speakers by asking questions and seeking clarifications on the topics discussed. The engagement of the students added value to the sessions and demonstrated their enthusiasm for acquiring knowledge in advanced technologies. The students' active participation through asking questions demonstrated their eagerness to learn and engage with experts in the field. The webinar series served as an excellent platform for students to enhance their understanding of advanced technologies and their potential applications.

Inaugural Function: The inaugural function took place on 1st April, and it set the stage for the webinar series. Initially Dr. H.S. Hota, Convenor of the program, has welcomed all the guests and explained about objectives of the international webinar series. He said that technology related to CS and IT are changing rapidly and are not possible to incorporate in the syllabus, this is the reason why the department has decided to organize this webinar series for the benefits of the students so that students will learn the new technologies and also know the requirement of IT industry and can prepare themselves for the industry.

The Vice Chancellor of the university, Prof. A.D.N. Bajpai, addressed the participants and emphasized the importance of using technology for the benefit of society. He highlighted the need for ethical and responsible implementation of technologies like Artificial Intelligence. Prof. Bajpai congratulated Dr. Hota, the department head, and his entire team for organizing the event.

Dr. Ashish Gadekar from Mauritius also addressed the audience, expressing his belief that such events would greatly enhance students' knowledge. He delivered a talk on Industry 4.0 as the first session. Dr. Dinesh Sharma from the University of Maryland, addressed all participants and emphasized the crucial role technology plays in our daily lives. The inaugural function concluded with vote of thanks by Dr. Rashmi Gupta, co-ordinator of the event.

The International Webinar Series spanned several sessions, with each session dedicated to a specific advanced technology topic. The series aimed to provide students with a comprehensive understanding of emerging trends, applications, and challenges associated with these technologies. Renowned speakers who shared their expertise and insights on various topics as below:

Artificial Intelligence (AI): AI refers to the development of computer systems that can perform tasks that typically require human intelligence. AI technologies include machine learning, natural language processing, computer vision, and robotics. AI is being used in areas such as healthcare diagnostics, autonomous vehicles, virtual assistants, and predictive analytics.

Internet of Things (IoT): IoT is a network of interconnected devices that can collect and exchange data. IoT enables the integration of physical devices with digital systems, creating new opportunities for automation, data analytics, and improved decision-making. Applications of IoT include smart homes, industrial automation, environmental monitoring, and healthcare monitoring systems.

Blockchain: Blockchain is a distributed ledger technology that enables secure and transparent transactions without the need for intermediaries. It provides a decentralized and immutable record of transactions, making it useful for applications such as cryptocurrencies, supply chain management, identity verification, and smart contracts.

Machine Learning : Machine learning is an application of artificial intelligence that uses statistical techniques to enable computers to learn and make decisions without being explicitly programmed. This makes it possible to build systems that can automatically improve their performance over time by learning from their experiences. It is predicated on the notion that computers can learn from data, spot patterns, and make judgments with little assistance from humans.

Cloud Computing : Cloud computing is the on-demand availability of computing resources (such as storage and infrastructure), as services over the internet. It eliminates the need for individuals and businesses to self-manage physical resources themselves, and only pay for what they use.

Data Science : Data science is the study of data to extract meaningful insights for business. It is a multidisciplinary approach that combines principles and practices from the fields of mathematics, statistics, artificial intelligence, and computer engineering to analyze large amounts of data. It combines tools, methods, and technology to generate meaning from data. Online systems and payment portals capture more data in the fields of e-commerce, medicine, finance, and every other aspect of human life.

The diverse range of topics covered during the webinar series provided students with a comprehensive understanding of various advanced technologies and their applications in different industries. The International Webinar Series spanned several weeks, covering a wide range of emerging techniques and their

applications. Eminent speakers from academia and industry were invited to deliver talks on various days, sharing their knowledge and experiences.

The webinar series aimed to provide participants with valuable insights into the latest advancements in technology, featured 12 expert speakers, each specializing in different areas of advanced technologies. Prominent speakers and their respective topics are as below:

Role	Name	Institution
Preside Over	Prof. A. D. N. Bajpai	Hon'ble Vice-Chancellor, Bilaspur (C.G.), India
Chief Guest	Dr. D. K. Sharma	University of Maryland Eastern Shore, USA
Speaker	Dr. Aashish Gadekar	Amity Institute of Higher Education, Mauritius
Convenor	Dr. H. S. Hota	Professor & HOD, Dept. of CSA, Atal Bihari Vajpayee University, Bilaspur (C.G.), India
Topic	"Robotics in Education"	Date: 03/04/2023
Speaker	Dr. Aaron A. Rababaah	American University of Kuwait
Topic	"Cyber Security"	Date: 08/04/2023
Speaker	Dr. Daniel Okunbor	Fayetteville State University, USA
Topic	"Applications of Machine Learning"	Date: 15/04/2023
Speaker	Dr. Tripti Swarnkar	SOA university, Bhubaneswar, India
Topic	"Trending IT Applications"	Date: 22/04/2023
Speaker	Dr. Abhishek Dubey	University of Technology & Applied Science Salalah Oman
Topic	"Cloud Computing"	Date: 23/04/2023
Speaker	Mr. Shankar Mohanty	Aon Digicon LLP, India
Topic	"Security and Privacy Issues with IoT Devices"	Date: 29/04/2023
Speaker	Dr. Rajeev Ranjan Singh	Glasgow Caledonian University, United Kingdom (U.K.)
Topic	"Application of SAP"	Date: 30/04/2023
Speaker	Mr. Praveen Deota	Business Process Senior Consultant at SAP, Bangluru, India
Topic	"Application of Deep Learning"	Date: 07/05/2023
Speaker	Dr. Sachin Nandan Mohanty	School of Computer Science & Engineering VIT University, AP, India
Topic	"Introduction to Data Science & Data Tools"	Date: 08/05/2023
Speaker	Dr. Abhishek Kumar Singh	Data Scientist, Exxon Bangaluru, India
Topic	"Career Opportunities for Computer Science in Australia"	Date: 13/05/2023
Speaker	Ms. Swapnil Nema	Infosys, Australia
Topic	"Basics of Data Science"	Date: 14/05/2023
Speaker	Dr. Er. Ranjan Das	PYTHONSOFT, Bhubaneswar, India
Co-Convenor	Dr. Rashmi Gupta	Asst Professor, Dept. of CSA, Atal Bihari Vajpayee University, Bilaspur (C.G.), India

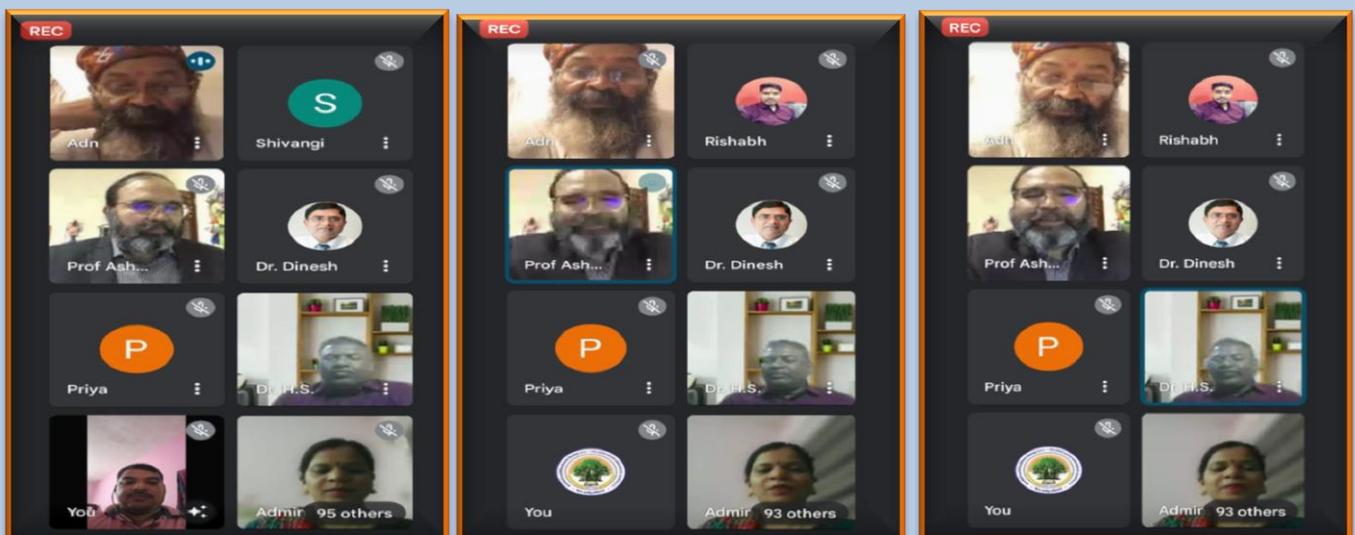
Conclusion: The International Webinar Series on Emerging Techniques and Its Application organized by the Department of Computer Science and Application provided an excellent platform for students to learn about the latest advancements in technology. The sessions conducted by eminent speakers from academia and industry offered valuable insights into emerging techniques and their applications.

The event was a collaborative effort, with support from The Global Knowledge Foundation Inc. USA, and received appreciation from the Vice Chancellor and other dignitaries. The webinar series achieved its objective of

creating awareness among students about emerging technologies. The department's efforts in organizing such events contribute to the holistic development of students and equip them with knowledge and skills relevant to the rapidly evolving technological landscape. The success of the webinar series encourages further initiatives to foster learning and exploration in the field of emerging technologies.

The success of the webinar series highlights the department's commitment to providing quality education and fostering a spirit of inquiry among students in the field of advanced technologies. The department looks forward to organizing more such events in the future to continue promoting knowledge sharing and skill development in advanced technologies. Emerging technologies have the potential to revolutionize industries, improve efficiency, and transform the way we live and work. The technologies mentioned in this report are just a few examples of the rapid advancements taking place in various fields. It is essential for businesses, governments, and individuals to stay informed about these emerging technologies and their potential impact. By embracing and harnessing these technologies, we can drive innovation, create new opportunities, and address societal challenges in the evolving digital era.

Glimpses Of Webinar



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Fig. 1. Block diagram for prepared CT image classification.

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Cloud Computing on AWS

By Shankar Mohanty
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Potential challenges

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- Development costs
- Integration issues
 - Ethical issues
 - Reluctance among medical practitioners to adopt AI
 - Fear of replacing humans
- Data privacy and security
 - Mobile health applications and devices that use AI
 - Lack of interoperability between AI solutions
- Data exchange
 - Need for continuous training by data from clinical studies
 - Incentives for sharing data on the system for further development and improvement of the system. Nevertheless,
 - All the parties in the healthcare system, the physicians, the pharmaceutical companies and the patients, have greater incentives to compile and exchange information
- State and federal regulations
- Rapid and iterative process of software updates commonly used to improve existing products and services

Industry Challenges ¹⁰¹	
High initial capital requirement	Potential for increased unemployment
Difficulty in deployment	Reluctance among medical practitioners to adopt AI
Stringent regulatory guidelines for medical software	Lack of curated healthcare data
Concerns regarding privacy and security	Lack of interoperability between AI solutions
State and Federal Regulations	

52 others

SMART HOMES: IOT DEVICES CAN BE USED TO CONTROL AND MONITOR VARIOUS ASPECTS OF A HOME, SUCH AS LIGHTING, TEMPERATURE, AND SECURITY. SMART HOME DEVICES CAN BE CONTROLLED REMOTELY USING A SMARTPHONE OR OTHER DEVICE.

89 others

YOU MAY BE USING THE CLOUD ALREADY

36 others

The FOUR V's of Big Data

53 others

Media Coverage

युवा शोध में रुचि ले एआइ व मशीन लर्निंग से सपने होंगे सच

अटल बिहारी वाजपेयी विश्वविद्यालय के कम्प्यूटर साइंस विभाग में कम्प्यूटर साइंस से संबंधित आधुनिक तकनीक विषय पर अंतरराष्ट्रीय वेबिनार हुआ। अमेरिका, ओमान, इंग्लैंड, आस्ट्रेलिया, मारीशस, कुवैत सहित भारत के विभिन्न सूचना प्रौद्योगिकी संस्थानों के विषय विशेषज्ञों एआइ व मशीन लर्निंग पर शोध करने युवाओं को प्रोत्साहित किया। दो टुक कहा कि इस क्षेत्र में भविष्य निर्माण की अपार संभावनाएं हैं। शोध में रुचि लेगे तो सभी सपने आसानी से पूरे होंगे।



उभरती प्रवृत्ति और उसका अनुप्रयोग विषय पर सबसे पहले विरोधों ने व्याख्यान प्रस्तुत किया। इस श्रृंखला में

देश-विदेश के विश्वविद्यालयों तथा प्रमुख आइटी संस्थाओं के विषय विशेषज्ञों ने आर्टिफिशियल इंटेलिजेंस, मशीन लर्निंग, आइओटी, साइबर सिक््युरिटी, इंडस्ट्री 4.0, रोबोटिक्स, आइटी एप्लीकेशन, डीप लर्निंग, पायथान, सैप इत्यादि पर प्रमुखता से जानकारी दी। कुलपति आचार्य पो. अरुण दिवाकर नाथ वाजपेयी ने कार्यक्रम की अध्यक्षता की। व्याख्यान में 120 प्रतिभागो शामिल हुए। विभागाध्यक्ष डा. एचएस होता कार्यक्रम के प्रमुख संयोजक तथा डा. रश्मि गुप्ता सह संयोजक रही।

बेरोजगारी होगी कम

आर्टिफिशियल इंटेलिजेंस, मशीन लर्निंग एक ऐसा क्षेत्र बन चुका है जिसमें रोजगार की अपार संभावनाएं हैं। बेरोजगारी को कम करने के साथ राष्ट्र को मजबूती देगा। बच्चों को शुरू से ही इन विषयों पर ध्यान केंद्रित करना होगा। युवाओं को शोध के क्षेत्र में आगे आना होगा। इस क्षेत्र में वे अपने सभी सपने सच कर सकते हैं।

-**प्रो.डीके शर्मा**
यूनिवर्सिटी आफ मैरीलैंड, यूएसए

एआइ तकनीक को समझें

आर्टिफिशियल इंटेलिजेंस का अर्थ है बनावटी (कृत्रिम) तरीके से विकसित की गई बौद्धिक क्षमता है। इसके जरिये कम्प्यूटर सिस्टम या रोबोटिक सिस्टम तैयार किया जाता है। उन्हीं तर्कों के आधार पर चलाने का प्रयास किया जाता है। इसके आधार पर मानव मस्तिष्क काम करता है। युवाओं को इस पर रुचि लेने की आवश्यकता है।

-**डा.आशीष गडकर**
अमेटी यूनिवर्सिटी, मारीशस

स्टूडेंट को मिलेगा लाभ

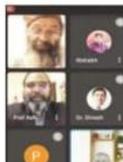
छात्रों को उनके करियर निर्माण में लाभ मिलेगा। शोधार्थियों को इस दिशा में खूब मेहनत करने होंगे। मशीन लर्निंग, आइओटी, साइबर सिक््युरिटी, इंडस्ट्री 4.0, रोबोटिक्स जैसे विषयों पर बच्चे रुचि लेने लगे हैं। इंडस्ट्री में इस तकनीक को किस प्रकार उपयोग किया जा रहा है। नवीन जानकारी होना अति आवश्यक है।

-**डा.एरोन रबाह**
अमेरिकन यूनिवर्सिटी आफ कुवैत

छात्रों को करियर निर्माण में मिलेगा लाभ: बाजपेई

आधुनिक तकनीक से संबंधी विभिन्न कार्यक्रमों का आयोजन

विषयवस्तु विभाग द्वारा कम्प्यूटर साइंस से संबंधित आधुनिक तकनीक से संबंधी विभिन्न कार्यक्रमों का आयोजन सम्पन्न रूप से किया जा रहा है और इसी क्रम में इस शैक्षणिक सत्र में छात्रों को नवीन तकनीक से संबंधी जानकारी प्रदान करने हेतु विभिन्न कार्यक्रमों का आयोजन किया जा रहा है।



एकांशिक एण्ड इंडस्ट्रियल पीपुलर व्याख्यान

यह व्याख्यान आज शीक सत्र में देश के प्रसिद्ध विश्वविद्यालयों तथा आइटी संस्थाओं के विद्वानों के विशेष विषयों की प्रस्तुति के माध्यम से किया जा रहा है। अतिरिक्त रूप से 21, 19, 17, 15, 13, 11, 9, 7, 5, 3, 1, 0, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160, 165, 170, 175, 180, 185, 190, 195, 200, 205, 210, 215, 220, 225, 230, 235, 240, 245, 250, 255, 260, 265, 270, 275, 280, 285, 290, 295, 300, 305, 310, 315, 320, 325, 330, 335, 340, 345, 350, 355, 360, 365, 370, 375, 380, 385, 390, 395, 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660, 665, 670, 675, 680, 685, 690, 695, 700, 705, 710, 715, 720, 725, 730, 735, 740, 745, 750, 755, 760, 765, 770, 775, 780, 785, 790, 795, 800, 805, 810, 815, 820, 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3345, 3350, 3355, 3360, 3365, 3370, 3375, 3380, 3385, 3390, 3395, 3400, 3405, 3410, 3415, 3420, 3425, 3430, 3435, 3440, 3445, 3450, 3455, 3460, 3465, 3470, 3475, 3480, 3485, 3490, 3495, 3500, 3505, 3510, 3515, 3520, 3525, 3530, 3535, 3540, 3545, 3550, 3555, 3560, 3565, 3570, 3575, 3580, 3585, 3590, 3595, 3600, 3605, 3610, 3615, 3620, 3625, 3630, 3635, 3640, 3645, 3650, 3655, 3660, 3665, 3670, 3675, 3680, 3685, 3690, 3695, 3700, 3705, 3710, 3715, 3720, 3725, 3730, 3735, 3740, 3745, 3750, 3755, 3760, 3765, 3770, 3775, 3780, 3785, 3790, 3795, 3800, 3805, 3810, 3815, 3820, 3825, 3830, 3835, 3840, 3845, 3850, 3855, 3860, 3865, 3870, 3875, 3880, 3885, 3890, 3895, 3900, 3905, 3910, 3915, 3920, 3925, 3930, 3935, 3940, 3945, 3950, 3955, 3960, 3965, 3970, 3975, 3980, 3985, 3990, 3995, 4000, 4005, 4010, 4015, 4020, 4025, 4030, 4035, 4040, 4045, 4050, 4055, 4060, 4065, 4070, 4075, 4080, 4085, 4090, 4095, 4100, 4105, 4110, 4115, 4120, 4125, 4130, 4135, 4140, 4145, 4150, 4155, 4160, 4165, 4170, 4175, 4180, 4185, 4190, 4195, 4200, 4205, 4210, 4215, 4220, 4225, 4230, 4235, 4240, 4245, 4250, 4255, 4260, 4265, 4270, 4275, 4280, 4285, 4290, 4295, 4300, 4305, 4310, 4315, 4320, 4325, 4330, 4335, 4340, 4345, 4350, 4355, 4360, 4365, 4370, 4375, 4380, 4385, 4390, 4395, 4400, 4405, 4410, 4415, 4420, 4425, 4430, 4435, 4440, 4445, 4450, 4455, 4460, 4465, 4470, 4475, 4480, 4485, 4490, 4495, 4500, 4505, 4510, 4515, 4520, 4525, 4530, 4535, 4540, 4545, 4550, 4555, 4560, 4565, 4570, 4575, 4580, 4585, 4590, 4595, 4600, 4605, 4610, 4615, 4620, 4625, 4630, 4635, 4640, 4645, 4650, 4655, 4660, 4665, 4670, 4675, 4680, 4685, 4690, 4695, 4700, 4705, 4710, 4715, 4720, 4725, 4730, 4735, 4740, 4745, 4750, 4755, 4760, 4765, 4770, 4775, 4780, 4785, 4790, 4795, 4800, 4805, 4810, 4815, 4820, 4825, 4830, 4835, 4840, 4845, 4850, 4855, 4860, 4865, 4870, 4875, 4880, 4885, 4890, 4895, 4900, 4905, 4910, 4915, 4920, 4925, 4930, 4935, 4940, 4945, 4950, 4955, 4960, 4965, 4970, 4975, 4980, 4985, 4990, 4995, 5000, 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5835, 5840, 5845, 5850, 5855, 5860, 5865, 5870, 5875, 5880, 5885, 5890, 5895, 5900, 5905, 5910, 5915, 5920, 5925, 5930, 5935, 5940, 5945, 5950, 5955, 5960, 5965, 5970, 5975, 5980, 5985, 5990, 5995, 6000, 6005, 6010, 6015, 6020, 6025, 6030, 6035, 6040, 6045, 6050, 6055, 6060, 6065, 6070, 6075, 6080, 6085, 6090, 6095, 6100, 6105, 6110, 6115, 6120, 6125, 6130, 6135, 6140, 6145, 6150, 6155, 6160, 6165, 6170, 6175, 6180, 6185, 6190, 6195, 6200, 6205, 6210, 6215, 6220, 6225, 6230, 6235, 6240, 6245, 6250, 6255, 6260, 6265, 6270, 6275, 6280, 6285, 6290, 6295, 6300, 6305, 6310, 6315, 6320, 6325, 6330, 6335, 6340, 6345, 6350, 6355, 6360, 6365, 6370, 6375, 6380, 6385, 6390, 6395, 6400, 6405, 6410, 6415, 6420, 6425, 6430, 6435, 6440, 6445, 6450, 6455, 6460, 6465, 6470, 6475, 6480, 6485, 6490, 6495, 6500, 6505, 6510, 6515, 6520, 6525, 6530, 6535, 6540, 6545, 6550, 6555, 6560, 6565, 6570, 6575, 6580, 6585, 6590, 6595, 6600, 6605, 6610, 6615, 6620, 6625, 6630, 6635, 6640, 6645, 6650, 6655, 6660, 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