

REPORT

The Role of Academia & IT in Upskilling the Digital Workforce

5th to 9thDecember, 2022



Central University of Jharkhand Ranchi

One Week Virtual Workshop On The Role of Academia & IT in Upskilling the Digital Workforce

One Week Virtual Workshop On The Role of Academia & IT in Upskilling the Digital Workforce was conducted by Central University of Jharkhand (CUJ), Brambe, Ranchi organized by Department of Computer Science and Engineering (DCSE) under the school of Natural Sciences of CUJ dated from 5thDecember 2022 to 9thDecember 2022 full day in which around300participants across Jharkhand, Bihar, Uttar Pradesh, Pondicherry, Tezpur, West Bengalparticipated for the same.

Number of Participants: 300

The eminent speakers / resource persons of this 5-days workshop on "The Role of Academia & IT in Upskilling the Digital Workforce" were:

Prof. A.K. Nayak, Advisor IIBM Group of Institutions Former President Computer Society of India



Prof. Nayak is having more than 37 years of experience in teaching, training, research & administration in the field of Computer Science, Information Technology & Management. He had authored 162 Papers, 12 Books, Edited 9 Books,10 proceedings of National & Internationals Conferences, Received many international & National Awards and his Biography is published in 7 International Directories. At present Prof Nayak is the member of all India Board for IT education & board of Studies of Comp. Science & IT, AICTE, Govt, of India & Member of Bureau of Indian Standard, Govt. of India.

Mr. Gautam Hazari, CTO, Sekura Mobile Inttelligence London



Gautam Hazari is the CTO at Sekura Mobile Intelligence and is based in London. He has been working in telecom industry for the last 22+ years on various domains, including emerging technologies,5G security, cyber security, blockchain, AI/ML. He is a futuristic and an emerging technology enthusiast; a thought leader working with the industry players and speaks at various platforms around the world for making the digital world a better and safer place.

Prof. Subhash Chandra Yadav, Head Computer Science & Engineering, Central University of Jharkhand



Prof. Chandra has 25+ years of teaching and IT industry experience. He is a young and dynamic academician in the field of Computer Science and Technology. Apart from carrying academic responsibility he has contributed to CSI as a National Chairman Education and Research (Division -V) for the year 2019/2021 and founder Chairman CSI- Varanasi. Taken various initiative for the dissemination of computer literacy in the society by organizing various workshop/seminar in the eastern UP / Bihar and organized CAP in villages of Ranchi (Jharkhand). His area of interest AI, Machine Learning, Deep Learning, Data Science, Cyber Security, IoT.

Prof. Durgesh Kumar Mishra, Professor & Director, Sri Aurobindo Institute of Technology, Indore



Prof. Durgesh is an ex-visiting faculty at IIT-Indore, MP, India. He has 27 years of teaching and 15 years of research experience. He has published more than 90 papers in refereed international/national journals and conferences including IEEE, ACM conferences. Dr. Mishra has delivered his tutorials in IEEE International conferences in India as well as abroad. He is also the programme committee member, and reviewer of several international conferences.

Prof. R.R. Deshmukh, Professor & former Dean Dr. Babasaheb Ambedkar Marathwada University Aurangabad



Prof. Deshmukh is Principal Program Coordinator for the DST-FIST program in department sanctioned by DST, New Delhi. Edited Twelve books and published more than 200 research papers in reputed Journals, National /International conferences. He received the "BHARATRATNA MOTHER TERESA GOLD MEDAL" Award 2015 for outstanding service in Education and Research to strengthen India's Unity and economic development and "Best Teacher Award" Award 2017 for Outstanding Excellence and Remarkable Achievement in the field of Teaching, Research and Publication from IRDP Group of Journal, Chennai, India.

Mr. P.K. Rathi, Mentor & Founder 3i Zone, Mumbai



Mr. Rathi is an Entrepreneurship and Innovation ecosystem enabler with 34+ years successful experience focused on ROI, Broad Leadership, Shared Value, CSR, and Operational Expertise based out in Mumbai, India. Mr. Rathi is Advisor India for Alibaba Cloud. He is also Member of the Academic Council of University of Jammu. He is on Computer Society of India's (CSI) National Executive Committee as Regional Vice-President Region 6 (Maharashtra & Goa). He National Convener for CSI's SIG on

Dr. Malay Nayak, Executive Director Buzz Ltd London



Dr Malaya Nayak is an Entrepreneur & Researcher with over 24 years of experience in designing, developing, and implementing high-performance hospitality and technology solutions. Malaya is currently an elected Fellow (FRSA) of the Royal Society of Arts, UK; Fellow (FIMA) of the Institute of Mathematics and its Applications, UK and Chartered Fellow (FBCS CITP) of the British Computer Society, UK; Senior Member of the IEEE & IEEE Computer Society, USA; Senior Member of Computer Society of India; and Senior Member of Association for Computing Machinery (ACM), USA.

Prof. Dharam Singh Jat, Professor, Namibia University of Science and Technology



Prof. Dharam is the author of more than 146 peer-reviewed articles and the author or editor of more than 16 books. His interests span the areas of multimedia communications, wireless technologies, mobile communication systems, edge, roof computing, Software Defined Networks, Network security, and IoT. He has contributed much to the development of multimedia communication over wired and wireless networks and formed the Special Interest Group on Wireless Networks (SIG-WNs) of CSI and designated first Convener and Chairman, SIG-WNs by CSI.

Dr. Prashant R. Nair, Head IQAC Amrita Vishwa Vidyapeetham, Coimbatore



Dr. Nair has 20 years of academic, research and administration experience at the university. He has served AMRITA as IQAC chair/vice-chair and computer Science & Engineering department vice-chair for over a decade. He has written 6 books and has 50+ reputed journal & conference publications. Has executed a cyber security project for DRDO. Has served CSI as national student coordinator and editor of CSI journal, transactions on ICT and communication.

INAUGRAL SESSION - DAY ONE

It all started with नमस्कार and a warm welcome to the one-week virtual workshop on **The Role of Academia & IT in Upskilling the Digital Workforce** organized by the Department of Computer Science and Engineering, Central University of Jharkhand, Ranchi.

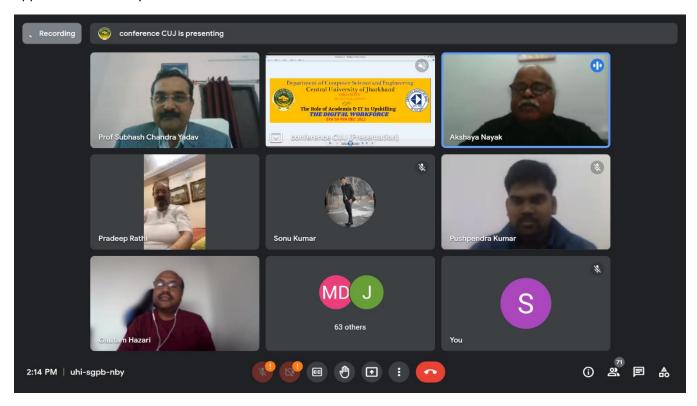
Prof. Subhash Chandra Yadav, the Head of the CSE and the Coordinator of the workshop programme came over the virtual dais and greeted the guests and the delegates with Johar extended his welcome and appreciation for Prof. Kshiti Bhushan Das, Patron and our Honorable Vice Chancellor, Central University of Jharkhand.

Prof. Yadav extended his sincere thanks to the chief guest of the event Prof. A.K. Nayak former past president and fellow Computer Society of India, advisor IIBM group Patna. AS uttered by Prof. Yadav, Prof. Nayak is a man with ground reality and moreover well known as the man of webinars organizing more than 500 webinars during the pandemic of COVID- 19 only for the knowledge dissemination in the country.

Prof. Yadav also welcomed on the virtual dais Mr. Gautam Hazari, the eminent speaker presently working as CTO, Sekura Mobile Intelligence London, United Kingdom.



The **first session** of the workshop was delivered by **Prof. A.K. Nayak,** Advisor IIBM Group of Institutions Former President Computer Society of India. He explained why upskilling in the digital era is important in information and communication technology. He said that all these are started with the Atmnirbhar Bharat program. He also discussed about 9 pillers of digital india -Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance – Reforming Government through Technology, e-Kranti (NeGP 2.0) – Electronic delivery of services, Information for All, Electronics Manufacturing – Target NET ZERO Imports, IT for Jobs, Early Harvest Programmes. The vision of Ek Bharat Shrestha Bharat will come true with this e-revolution. The country is moving towards becoming a prosperous digital world. Vision, Make in India, Startup India, Digital Empowered Society have worked to change the picture of India and provide employment opportunities to the youth.

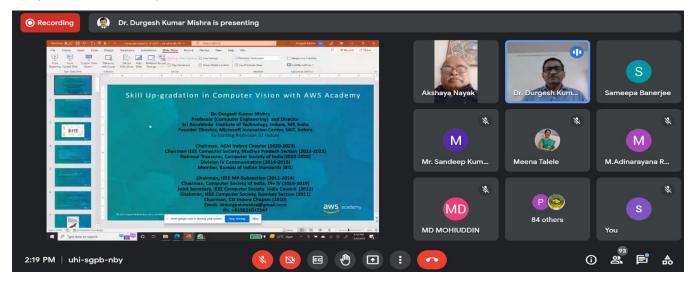


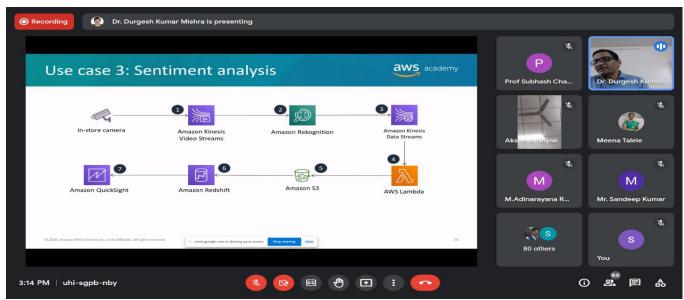
The **2nd session** on Day-1 was handled **Mr. Gautam Hazari,** CTO, Sekura Mobile Inttelligence London, the sessions were mainly discussed about digital transformation and growing need of digital workforce and highlighted the impact of digital currency CBDC in Indian scenario. He also said that carefulness is required in this digital era.



The Day-2 sessions 3 which was taken by Prof. Durgesh Kumar Mishra, Professor & Director, Sri Aurobindo Institute of Technology, Indorewas mainly on Skill Up-gradation in Computer Vision. Professor Mishra has explained about power of data and its analytics. He gives insightful knowledge related to how the challenges related to skill upgradation in computer vision can be solved. He suggested that we can use MOOC courses, Mobile edge devices programming language and deep learning courses to upgrade our skill in computer vision field. Hediscussed about computer vision and what are some problems related to computer vision like content recognition, image analysis, object classification, object detection, object segmentation etc. He also explain some use cases of computer vision – searchable image library, sentiment analysis.

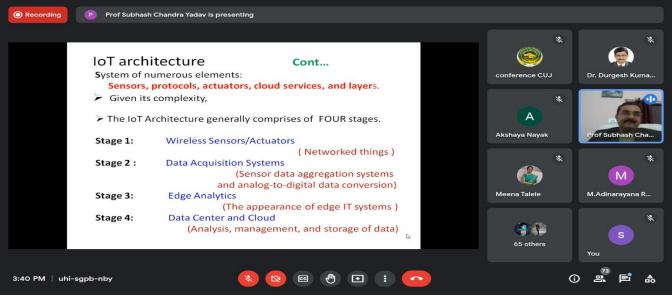
The session was more theoretical with involving participants with ideas and the class was mainly based on the computer vision field in present time.



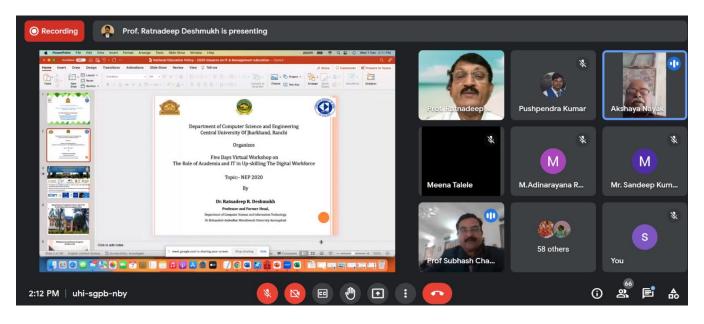


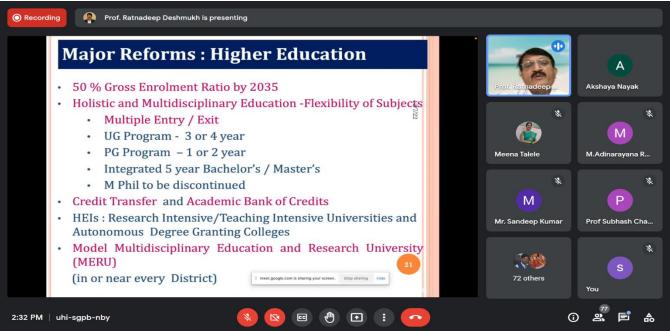
The Day-2 sessions 4which was taken by Prof. Subhash Chandra Yadav, Head Computer Science & Engineering, Central University of Jharkhand was mainly on IoT Access Terminology & Protocol. Professor Yadav has explained about machine-to-machine communication architecture for IoT and how the devices get connected to each other that is IoT connectivity. He discussed about the technologies for IoT connectivity which are standard wireless access, private long range and mobile IoT. IoT architecture which is divided into stages is also discussed which includes Wireless sensors actuators, data acquisition systems, edge analytics and data center and cloud.





The Day-3 session 5was handled byProf. R.R. Deshmukh, Professor & former Dean Dr. Babasaheb Ambedkar Marathwada University Aurangabad. The focus of the session was NEP 2020.Prof. Deshmukh gave the insightful knowledge about evolution of national education policy and its key features. He told how the importance of science is increases with the advancement of information and communication technology. The big shift is happening towards online learning and India moves towards becoming a true knowledgeable society.Because of NEP 2020 policy a new vision and architecture for higher education has been envisaged in the policy with large, well resourced, vibrant multidisciplinary institutions.



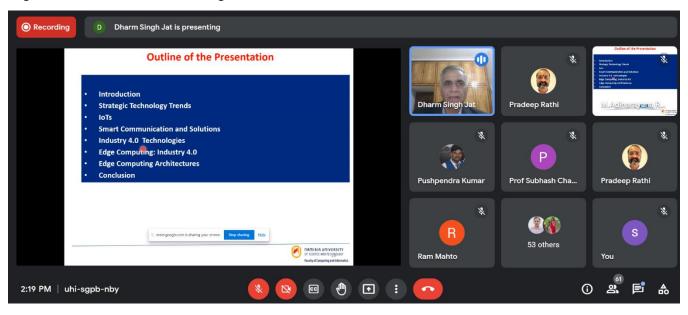


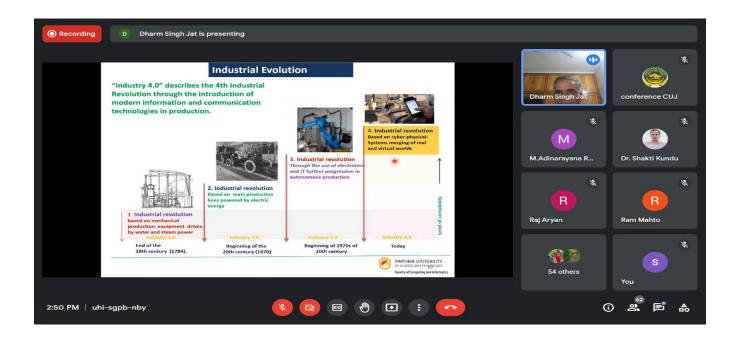
The 6th session on Day-3 was handled by Dr. Prashant R. Nair, Head IQAC Amrita Vishwa Vidyapeetham, Coimbatore. The session was based on Skill Requirement for Effective Management of Cyber Security. He discussed that digital transformation is taking place that is why everything is becoming smart so there is great need for protecting the data which is asset nowadays, here the role of cyber security come. He discussed about cyber security goals, CIA &N of cyber security and what are the cybersecurity action we can take to protect our data. Various cyber security certification course GSEC, SSCP, CEH, CISSP, CISM and many more were discussed.





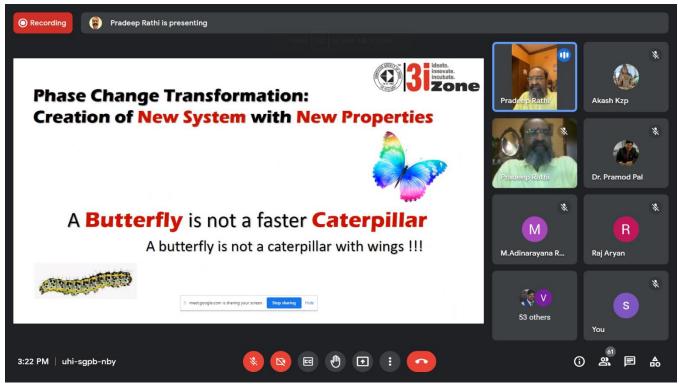
The Day-4 **sessions7**thwas taken by**Prof. Dharam Singh Jat,** Professor, Namibia University of Science and Technology. He discussed about the most important skills required for smart computing which are – smart communication, big data infrastructure and analytics and cyber security. He also gives introduction about IoT, Edge computing and how these new technologies are helping in smart communication. The session also deal with industry 4.0, which is focused on creating intelligent products, processes and procedures. The essence of the industry vision 4.0 is in the Internet of Things and Artificial Intelligence. He concluded that the intelligent edge is the foundation for future digital business.



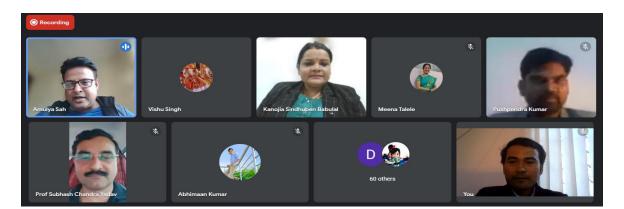


The **8**thsession on Day-4 was handled by**Mr. P.K. Rathi**, Mentor & Founder 3i Zone, Mumbai. The session was mainly on**Innovation andEntrepreneurship**. He introduced the concept of technology disruption and business innovation to the participants. He explained about skills of exponential leadership which are – unlearn mental models, learn to let go without losing control and leverage diverge thinking. He also give insight about why do smart people at smart organizations consistently fail to anticipate or lead market disruptions and discussed about business model innovation.





Having successfully completed the four days of the workshop, the fifth day of the workshop was geared up for insights on the digital workforce. To commence the talk the digital podium was open to invitation for Mr. Amulya Sah. Mr Amulya Sah had a vast experience in the field of human resource management working in India and globally in Computer, Software and IT industry with some of the global brands such as Samsung, IBM, Birla Soft and Teamcomputers as a human resource leader. There could be nobody but him who has had the opportunity to lead the digital human resource first hand. The formal topic of his presentation was 'digital human resource'. Mr. Sah started the topic keeping in mind the diverse audience from india and abroad who have been looking forward to enlightening themselves with the idea of digital workforce. The concept as Mr. Sah described touched upon varied range of job requirements for the future industry driven with chat-bots and technology. The physical workforce needs to walk hand in hand with their digital counterparts. Its only when the next generation of workforce is equipped with the digital skills and resources we would be able to compete with the global market for products and services. Mr. Sah emphasized that his experience of the human resource industry which has spanned the evolving market in his tenure as a human resource leader in varied range of experiences, lets him see how valuable a digital workforce under preparation is. The future is bright he addressed the audience to come forward and gain experience and expertise of the digital kind in any space



they choose to work. He concluded with his ambition to give back to the society through his own contributions in the development of the digital workforce. His remarks and the talk concluded with the next set of events of the valedictory session.

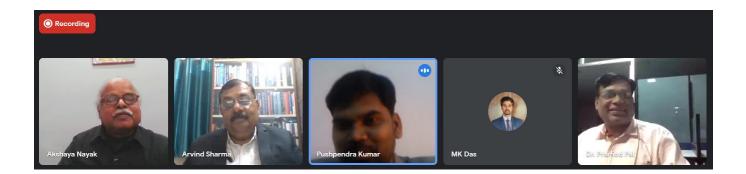
Valedictory Session

With the last talk of the day from Mr. Sah, the valedictory session had guests like. Prof. A. K. Nayak and Mr. Arvind Sharma, Incharge - Department of Computer Science at Lucknow Christian College, Lucknow. The guests were welcomed to grace the event by the Head of the Department of Computer science and Engineering, Central University of Jharkhand; Prof. S.C. Yadav. Prof. A.K. Nayak, Advisor IIBM Group of Institutions Former President Computer Society of India talked about the need for a digital India which is equipped with digital richness and a digital compassion. He also emphasized about the need for digital kranti that would realize the nation's policy of Ek-bharat Shresta Bharat and eventually lead India on the path of rapid progress. He also talked about the need for up skilling the digital workforce which is an essential ingredient in the 21st Centaury India. To be a future ready citizen who can embark on a journey of self employment and sustainability the upskilling of the digital workforce is the key. Mr. Arvind Sharma also provided his point of view in the wake of



digital up-skilling and empowerment for the youth of the Nation and worldwide. He categorically brought about the idea of the network that builds upon the digital bench strength to take up roles in the new age of Artificial intelligence. Prof. S.C. Yadav appreciated the remarks and the highlights presented by the panel in the Valedictory session. He also appreciated the audience who had their participation from all over the country and abroad.

The feedback session was the event next where we had the audience provide their suggestions and feedback on the overall five day workshop. Not just verbally but the organizers also received audience feedback in the form of Google forms. The audience highlighted the key takeaways for them and the learning they might use for the betterment of not just their's but also the people who are near and dear to them in their fraternity either education or profession.



Finally the Vote of Thanks was presented by Dr. Pushpendra Kumar, Assistant Professor, Department of CSE, Central University of Jharkhand. In his vote of thanks, Dr. Kumar brought about the key features from the experts from all the five days. He in his vote of thanks mentioned how the experts helped the audience and the faculty member and the department in general in fine tuning the workshop to the needs of the audience. The topic

'The role of academia and IT in up-skilling the digital workforce' is none-the-less a stepping stone in lurking into the future of harnessing the benefits and power of digital infrastructure, technology and overall digital existence.

Program Schedule

Event Schedule		
Inaugural Session : December 5, 2022 (Monday)		
02-03pm	2:00 /2:05 Welcome Address 2:05/ 2:10 Theme Presentation 2:11/2:25 Presidential Address	Prof. HP Singh Dean, School of Engg. & Technology Prof. (Dr.) Subhash Chandra Yadav, Head, DCSE Prof. K.B. Das, Hon'ble VC, CUJ
2:25- 03pm	Inaugural & Keynote Address	Prof. A K. Nayak Advisor of IIBM Group of institutions Former president of Computer Society of India Former president of ICT section of Indian Science Congress Member 'Board for IT Education AICTE' Govt. of India
03-04 pm	Invited Talk	Mr. Gautam Hazari CTO Sekura Mobile Intelligence and is based in London
06/12/2022		
02-03pm	Skill Up-gradation in Computer Vision	Prof. Durgesh Kumar Mishra Director and Professor (CSE) & Founder Director, Microsoft Innovation Centre at Sri Aurobindo Institute ofTechnology, Indore
03-04pm	Enhancing Skill in Mobile Network Management	Mr. Malay Nayak Executive Director with IT Buzz Ltd, London
07/12/2022		
02-03pm	NEP 2020	Prof. R. R. Deshmukh Professor in Department of CSIT, Dr. B.A.M. University, Aurangabad
03-04pm	Skill Requirement for Effective Management of Cyber Security	Dr. Prashant R. Nair Chairman of IQAC, Amrita Vishwa Vidyapeetham, Coimbatore
08/12/2022		
02-03pm	Skill Enhancement in Smart Computing	Prof. Dharam Singh Professor of Computer Science at Namibia University of Science and Technology (NUST).
03-04pm	Innovation and Entrepreneurship	Mr. P. K. Rathi Mentor & Founder, 3i Zone, Mumbai
09/12/2022		
02-03pm	Digital Human Resource	Mr. Amulya Sah Chief Human Resource Officer, TeamComputers PVT. LTD.
03-04pm	Valedictory Session	Address by Prof. A.K. Nayak, Arvind Sharma & Prof. S.C. Yadav Feedback Session and Vote of Thanks

Media Coverage of five days Virtual Workshop on 'The Role of Academia & IT in Upskilling the Digital

Workforce': Ranchi

'ई-क्रांति से साकार होगी एक भारत श्रेष्ट भारत की कल्पना'

रांची। केंद्रीय विश्वविद्यालय झारखंड के कंप्यूटर साइंस एंड इंजीनियरिंग विभाग की ओर से डिजिटल युग में डिजिटल कार्यबल बढाने के लिए शिक्षण संस्थाओं और सचना प्रौद्योगिकी की क्या भूमिका होगी, इस विषय पर पांच दिवसीय कार्यशाला की शुरुआत सोमवार को हुई। पहले दिन मुख्य वक्ता प्रो एके नायक (कंप्यूटर सोसायटी ऑफ इंडिया के पूर्व अध्यक्ष) ने कहा कि एक भारत श्रेष्ठ भारत, की कल्पना ई-क्रांति से साकार होगी। विजन, मेक इन इंडिया, स्टार्टअप इंडिया, डिजिटल एंपावर्ड सोसायटी ने भारत की तस्वीर बदलने का काम किया है।

अंतर्राष्ट्रीय विशेषज्ञ गौतम हजारी, चीफ ट्रेनिंग ऑफिसर, सेक्रा मोबाइल इंटेलिजेंस ने डिजिटल ट्रांसफॉर्मेशन व डिजिटल वर्क फोर्स की बढ़ती जरूरतों पर चर्चा की। कार्यशाला में कंप्यूटर साइंस एंड इंजीनियरिंग विभाग के विभागाध्यक्ष प्रो सुभाष चंद्र यादव, संयोजक डॉ प्रशांत प्रस्न, डॉ कनौजिया, सिधुबेन बाबुलाल व डॉ पृष्पेंद्र कुमार ने भी अपने विचार साझा किए।

Hidustaan: 6.12.2022

डिजिटली समृद्ध बनने की दिशा में अग्रसर है देश : प्रो नायक

रांची. कंप्यूटर सोसाइटी ऑफ इंडिया के पूर्व अध्यक्ष व वैज्ञानिक प्रो एके नायक ने कहा है कि देश डिजिटली समृद्ध बनने की दिशा में अग्रसर है. विजन, मेक इन इंडिया, स्टार्टअप इंडिया, डिजिटल इंपावर्ड सोसाइटी भारत की तस्वीर बदली है. युवाओं को रोजगार के अवसर मिले हैं. प्रो नायक केंद्रीय विवि, झारखंड (सीयूजे) में डिजिटल युग में डिजिटल वर्क फोर्स बढ़ाने के लिए शिक्षण संस्थाओं और इनफॉरमेशन तकनीक की भूमिका पर ऑनलाइन बोल रहे थे.

सेकुरा मोबाइल इंटेलिजेंस, लंदन के चीफ ट्रेनिंग ऑफिसर गौतम हजारी ने डिजिटल ट्रांसफॉरमेशन और डिजिटल वर्क फोर्स की बढ़ती जरूरतों के बारे में विस्तार से बताया. इससे पहले कुलपति प्रो क्षिति भूषण दास ने पांच दिवसीय कार्यशाला की अध्यक्षता की. दूसरे दिन थ्री जोन मुंबई के फाउंडर व मेंटर पीके राठी, आइटी बज लिमिटेड के कार्यकारी निदेशक डॉ मलई नायक, टीम कंप्यूटर प्राइवेट. लिमिटेड के एचआर चीफ अमुल्य शाह व्याख्यान देंगे. विभागाध्यक्ष प्रो सुभाषचंद्र यादव ने सबका स्वागत किया. धन्यवाद ज्ञापन डॉ पुष्पेंद्र कुमार ने किया.

Prabhat Khabar: 6.12.2022

Five-day workshop on 'The Role of Academia and IT in Upskilling the Digital Workforce' begins at CUJ

RANCHI: The Department of Computer Science and Engineering, Central University of Jharkhand University of Jharkhand began a five-day workshop to brainstorm on the role of educational institutions and information technology increasing the digital work-force in this digital age. The inauguration ceremony was presided over by the Vice Chancellor of Central University of Jharkhand, Professor K. B. Das.

Speaking at the workshop, Professor A K Nayak said that the vision of Ek Bharat Shreshtha Bharat will come true with this e-revolution.



"The country is moving towards becoming a prosper-ous digital world. Make in India, Startup India, Digital Empowered Society have worked to change the picture of India and provide employment opportunities to the youth," he said.

International Gautam Hazari. Officer, Secura Mobile Intelligence, London discussed in detail about dig-ital transformation and growing need of digital workforce and highlighted the impact of currency CBDC in

More than 300 people from India and abroad will participate in this five-day workshop. Other key experts during the workshop - P.K. Rathi, Mentor & Founder 3i Zone Mumbai, Dr. Malai Navak, Executive Director IT Buzz Ltd. London, and Amulya Shah, Chief Human Resource Officer, Team Computer Pvt. Ltd., will deliver expert lectures.
Head of the Department

Computer Science and Engineering Professor Subbash Chandra Yaday welcomed the guests and said that in view of the increasing importance of digitalization and to meet the challenges.

will need a highly digital workforce. The Digital India program of the country will be successful only when we will be able to make the youth digitally literate. Educational institutions and the IT industry will have to work with mutual cooperation to create an employment layer for the youth and to meet the needs arising out of digital transformation, only then we will be able to give a basic shape to the National Education Policy 2020. Workshop coordinator Dr Prashant Prashun. Kanojia Sindhuben Babulal and vote of thanks was done