ANNUAL REPORT (2021-22)

01 July 2021- 30 June 2022

Department of Computer Science and Engineering

Faculty of Engineering & Technology

Established (year): 2000

About the Department:

Computer Science & Engineering is the first department of Faculty of Engineering & Technology established in year 2000. It started with an intake of 30 seats today it has an intake of 230. Department has MoU with IBM, TCS, EMC^2, NIELIT. It has a lab with all required software and computer system with latest configuration. The department have an active Google Developer Student Club being recognized by Google due to its active participation in Latest Technologies like Cloud/Blockchain/ML events of Google. Department also runs the NPTEL local chapter of GKV and look after the website of GKV.

Head of the Department: Dr. Mayank Aggarwal

Faculty Members:

1. Dr. Mayank Aggarwal
2. Dr. Suyash Bhardwaj
3. Dr. Nishant Kumar
4. Mr. Namit Khanduja
5. Mr. Agam Goyal
6. Mr. Vivudh Fore
7. Dr. Aman Tyagi
8. Mr. Ashwani Kumar
9. Mr. Aman Tyagi
10. Mr. Deepak Panuili
11. Mr. Sumit Bansal

Details of Publication/Conference attended/ Workshop attended/ Awards/ Invited talk etc.:

I. No. of publications in UGC listed journals with impact factors (if any): **2** – Annexure 1
II. No. of books/edited books/chapters in books: **3** – Annexure 2
III. No. of papers presented in conferences/seminars by the faculty members: **1** – Annexure 3
IV. No. of awards to faculty members: **5** – Annexure 4
V. No. of Patents: **8** – Annexure 5
VI. No of Invited talk delivered: **17** - Annexure 6
VII. No. of FDP/ Workshop Attended **23**– Annexure 7
VIII. No. of Events Organized – Annexure 8

Head

Annexure 1

Paper Published in journal

1. Mr. Sumit Bansal and Dr. Mayank Aggarwal published a paper titled "A Systematic review of task scheduling approaches in fog computing" in Transactions on Emerging Telecommunications Technologies (Wiley)" on May 2022, ISSN: 2161-3915, Impact Factor - 3.310.

2. Mr. Deepak Painuli and Dr. Suyash Bhardwaj published a paper titled "Recent advancement in cancer diagnosis using machine learning and deep learning techniques: A comprehensive review" in Computers in Biology and Medicine (ScienceDirect), May 2022, ISSN: 0010-4825, Impact Factor – 6.698.

Annexure 2

Book/Book Chapter Published

1. Mr. Sumit Bansal and Dr. Mayank Aggarwal published a book titled "Handbook of Amazon Web Services (A Practical Guide)" on Feb 2022, ISBN-13: 978-9356110212.
2. Dr Nishant Kumar and Dr Suyash Bhardwaj published a book titled "Handbook of UNIX: A Practical Approach" by Satyam Publishing House, Jan 2022, ISBN: 978-81-953249-6
3. Dr. Aman Tyagi published a book chapter titled "Healthcare-internet of things and its components: Technologies, benefits, algorithms, security, and challenges." In Sep 2021 in IGI Global publication ISBN: 978-15-2256067-8.

Annexure 3

Paper Presented in Conference

1. Dr. Suyash Bhardwaj Presented a paper entitled "Yogic Management of Computer Related illness" in three day online International Conference on Indian Traditional Yoga System Theory and Practice organized by Department of Yogic Science, Gurukula Kangri (Deemed to be University), Haridwar Sponsored by Ministry of AYUSH, Govt. of India, New Delhi from 24 to 26 May, 2022.

Annexure 4

Awards

1. Dr. Suyash Bhardwaj Awarded with Certificate of Appreciation from E & ICT Academy, IIT Kanpur for organising the first round of SMART HACKS 2021 on 21 October 2021
2. Dr. Suyash Bhardwaj Awarded by Certified Microsoft Innovative Educator Award by Microsoft on 24 December 2021 in online mode.
3. Dr. Suyash Bhardwaj Awarded with Primary Evaluator Award from Ministry of Education, Ministry of Information and Broadcasting, Ministry of MSME Govt. of India for exceptional contribution as a Primary evaluator in Toycathon 2021, on 25 Dec 2021 in online mode.
4. Dr. Suyash Bhardwaj Awarded with Active SPOC Award for Jan- Apr 2022 Sessions on July 16, 2022.
5. Dr. Suyash Bhardwaj Awarded with Active Mentor Award for Jan – Apr 2022 Session on July 16, 2022.

Annexure 5

Patent Published

1. Dr. Mayank Aggarwal and Mr. Sumit Bansal published an Indian Patent titled "System and Method for Reporting Information Related to Drug Trafficking anonymously" on May 2022, Patent Number – 202211029346.
2. Dr. Mayank Aggarwal, Sumit Bansal published a patent titled "A Cloud-Fog Based Architecture For Smart Healthcare System For Industry And Society Purpose" on 23 Dec 2021 patent number - 2021107417
3. Dr. Suyash Bhardwaj and Dr. Nishant Kumar published a Patent no. 2021105103 "Wireless Charging Device with Built-In Power Backup" as Australian Innovation Patent filed on 08/08/2021 registered in the Register of Patents on 13 April 2022.
4. Dr. Nishant Kumar, Dr. Suyash Bhardwaj, Agam Goyal published a patent titled "An Apparatus and a Method for Wirelessly Charging Multiple Electronic Devices" on 28 July 2021. Patent number – 2021103609
5. Mr. Sumit Bansal, Mr. Deepak Painuli published a patent titled "Soft Fairness Based Scheduling Mechanism Using Machine Learning For Cloud Computing" on 31 Aug 2021. Patent number – 202141039379
6. Mr. Deepak Painuli published a patent titled "Robust Outlier Detection In Noisy Data Classification System Under Abundant Mislabeled Training Instances Using Svm Lie Group Machine Learning Model For Brain Images" on 27 Aug 202. Patent number – 202141037190
7. Mr. Namit Khanduja published a patent titled "Early detection of Denial-of-Service (DoS) attack and Deception attack in industrial cyber physical systems" on 3-November,2021. Patent number – 2021105857.
8. Mr. Namit Khanduja, Agam Goyal, Ashwani and Aman Tyagi published a patent titled "Smart Street Light Management System" on 10-November,2021. Patent number- 2021106053

Annexure 6

Invited Talk Delivered

1. Dr Mayank Aggarwal delivered an invited talk on Cryptocurrency a new era in virtual labour market and legal issues at GNDU, Amritsar on 13/7/22
2. Dr Mayank Aggarwal delivered an invited talk on Blockchain and Applications at RECM, Nagpur on 14/6/22
3. Dr Mayank Aggarwal delivered an invited talk on Decentralized Application Development – Blockchain at DEPSTAR-CHARUSAT, Gujrat on 2/3/2022
4. Dr Mayank Aggarwal delivered an invited talk on Advancements in Technologies at COER, Roorkee on 6/2/2022
5. Dr Mayank Aggarwal delivered an invited talk on Securing Applications by Blockchain at M.J.P. Rohilkhand University, Bareilly on 15/11/2021
6. Dr. Mayank Aggarwal delivered an invited talk on Ethereum and Smart Contracts at Poornima University, Jaipur on 24/09/2021
7. Dr. Mayank Aggarwal delivered an invited talk on Blockchain Introduction and History at Poornima University, Jaipur on 21/09/2021

8. Dr. Mayank Aggarwal delivered an invited talk on Smart Technologies at FET, GKV, Haridwar on 20/9/21

9. Dr. Mayank Aggarwal delivered an invited talk on Cyber Security at GNDU Amritsar on 13/9/21

10. Dr. Mayank Aggarwal delivered an invited talk on Basics of Blockchain and Consensus Mechanism at NIT, Jaipur on 6/9/2021

11. Dr. Mayank Aggarwal delivered an invited talk on Blockchain and Machine Learning at Uttarakhand Open University on 17/8/2021

12. Dr. Mayank Aggarwal delivered an invited talk on   Hands-on Building Smart Contract using Remix at AURO University, Surat on 6/7/2021

13. Dr. Mayank Aggarwal delivered an invited talk on Blockchain Background at AURO University, Surat on 5/7/2021

14. Dr. Mayank Aggarwal delivered an invited talk on Blockchain Introduction and History at AURO University, Surat on 5/7/2021

15. Dr. Suyash Bhardwaj delivered an Invited talk on "Applications of AI in Agro- Industries" in College of Engineering Roorkee, during the One-week Faculty Development Programme (FDP) on "Scaling up agricultural & allied Sciences education and research with new methodologies on 23 March 2022.

16. Dr. Suyash Bhardwaj delivered an Invited talk on "Web Technologies" in Dev Sanskriti Vishwavidyalaya, Haridwar on 05 May 2022.

17. Dr. Suyash Bhardwaj delivered an Invited talk on "Google Tips and Tricks" in Economics Department, GKDU on 27 May 2022.

Annexure 7

FDP/Workshop Attended

1. Dr. Suyash Bhardwaj attended UGC Sponsored Refresher Course in Information and Communication Technology (MD) at HRDC, Lucknow from 09-08-2021 to 21-08-2021

2. Dr. Suyash Bhardwaj attended in AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Artificial Intelligence for Speech and Bio-Signal Processing" organized by Indian Institute of Information Technology Dharwad from 20-09-2021 to 24-09-2021

3. Dr. Suyash Bhardwaj attended AICTE QIP sponsored Online STC on Intelligent Nanophotonics conducted by Computer Science and Engineering Department, NITTTR, Chandigarh from 04-10-2021 to 09-10-2021

4. Dr. Suyash Bhardwaj attended National Workshop on "Research Methodology, Publication & Ethics" (RMPE-2022) organized by Department of Physics & IQAC, GK(DU), Haridwar in Collaboration with Uttarakhand Science Education & Research Center (USERC) from 25-03-2022 to 30-03-2022

5. Dr. Aman Tyagi attended One-Day Online Workshop on "How to Conduct the Student Induction (SIP) Program" organized by All India Council for Technical Education (AICTE) On 21-09-2021

6. Dr. Aman Tyagi attended "Launching 'Review Assistant': An Al-powered Tool for Peer Reviewers" organized by Raxter.io and Enago on 22-09-2021

7. Dr. Aman Tyagi attended "Common English Translation Mistakes in Academic Writing- Tips, Tricks, and Tools!" organize by Ulatus and Enago on 20-10-2021

8. Dr. Aman Tyagi attended "Editorial Perspectives on Science & Technology Journals" organized by Taylor & Francis Group on 24-08-2021
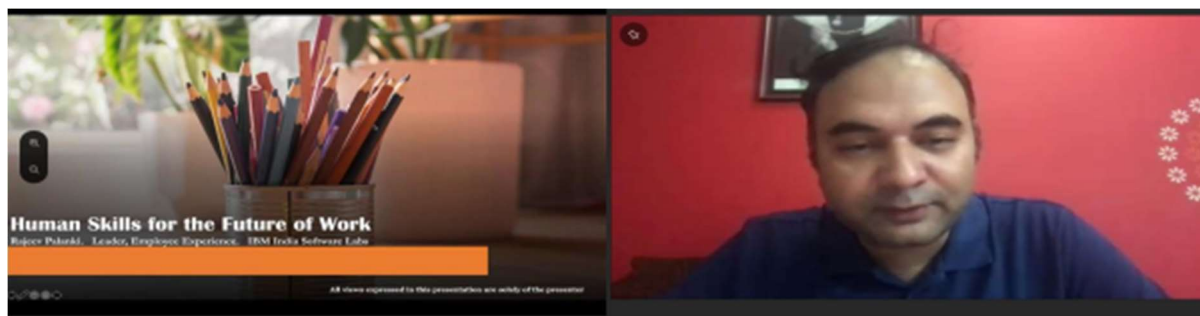
9. Dr. Aman Tyagi attended "Excellence in Peer Review: How to be an effective peer review" organized by Taylor & Francis Group on 24-09-2021

10. Dr. Aman Tyagi attended "Avoiding Rejections: how to successfully navigate the publishing process" organized by Taylor & Francis Group on 09-12-21

11. Dr. Aman Tyagi attended "Publishing Ethics" organized by Taylor & Francis Group on 23-02-2022

12. Dr. Aman Tyagi attended "How to boost citations - Tips for researchers" by The Electrochemical Society and Enago on 30-06-2022

13. Mr. Deepak Painuli attended One Week International Virtual FDP on "Emerging Techniques in Biomedical Instrumentation-ETBI 2021" organized by Koneru Lakshmaiah University, Guntur from 28-06-2021 to 03-07-2021

14. Mr. Deepak Painuli attended One Week ATAL FDP on "Artificial Intelligence in Revolutionizing Healthcare" organized by National Institute of Technology Puducherry, Karaikal from 19-07-2021 to 23-07-2021

15. Mr. Deepak Painuli attended One Week ATAL FDP on "Machine Learning in Medical Image Processing" organized by Katihar Engineering College, Katihar from 05-09-2021 to 09-09-2021

16. Mr. Deepak Painuli attended "One Week ATAL FDP on "Intelligent Computing in Healthcare" organized by National Institute of Technology, Raipur." from 20-09-2021 to 24-09-2021

17. Mr. Deepak Painuli attended One Week ATAL FDP on "Applied Artificial Intelligence" organized by CDAC, Noida. from 29-11-2021 to 03-12-2021

18. Mr. Deepak Painuli attended One Week ATAL FDP on "Advance Statistical & Machine Learning Models (ASMLM-2021)" organized by Indian Institute of Information Technology, Ranchi.from 15-12-2021 to 19-12-2021

19. Mr. Sumit Bansal attended One-week AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Integration of Renewable Energy and Smart Grids for Smart Cities" from 07.03.2022 to 12.03.2022

20. Mr. Sumit Bansal attended One-week AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Fog and Edge Computing Challenges and Research Directions" from 25.09.2021 to 29.09.2021

21. Mr.Sumit Bansal attended One-week AICTE Training and Learning (ATAL) Academy Online Advanced FDP on "Stress Management" from 13.09.2021 to 17.09.2021

22. Mr. Sumit Bansal attended One-week AICTE Training And Learning (ATAL) Academy Online Advanced FDP on "IoT & Cyber Security" from 06.09.2021 to 10.09.2021

23. Mr. Sumit Bansal attended One-week AICTE Training And Learning (ATAL) Academy Online Advanced FDP on "Cryptocurrency and Blockchain Technology" from 30.08.2021 to 03.09.2021
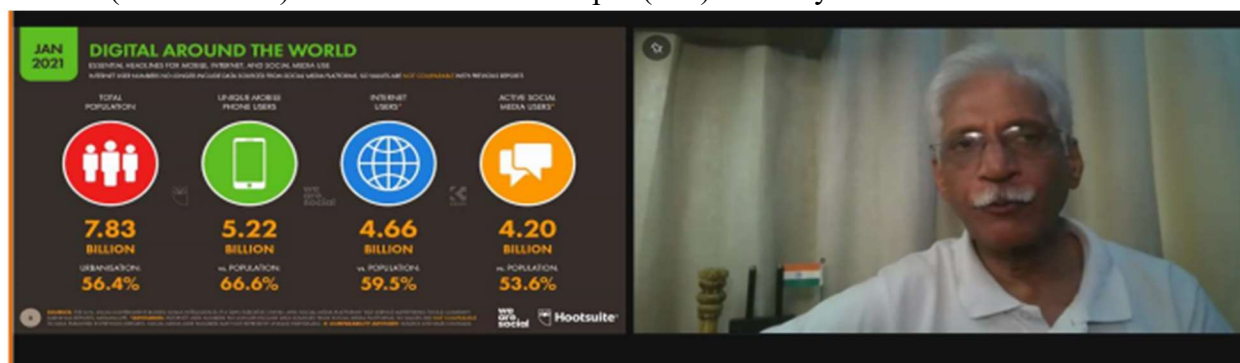
Annexure 8

Events Organized:

1. A Regional and Topical Event by IBM named "Digital Developer Conference: Data & AI", was held on June 8 2021 from 10:30 AM to 01 PM. This regional event was organized to bring together local developer communities to engage with leaders and experts from their region. Get thorough understanding of industry-recognized data and AI skills from IBM experts,

partners, and the worldwide community. Mr. Deepak Painuli & Mr. Namit Khanduja, Assistant Professor, FET-GKV Haridwar, along with 100+ students from CSE branch of GKV has attended and learned industry's expected skills through hands-on workshop conducted during the conference.

2. Two special presentation (I & II) in response to National Webinar held on 12th June with Dr. Anil Sahasrabudhe, Chairman, AICTE (5th National Event by IBM) by IBM Innovation Center for Education (ICE) has been held on June 22 & 25, 2021 respectively in virtual mode by IBM and hosted by its industrial partner named Datagami Technology Services Pvt. Ltd, Mumbai - 400 069(9702934397) from 11.30 am to 1.00 pm (IST) both days
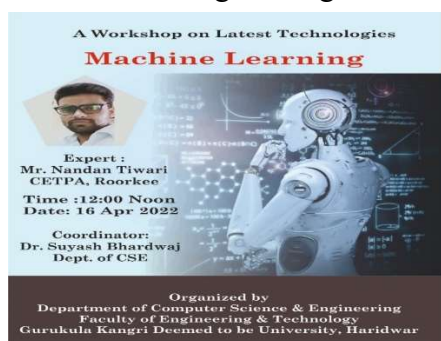

3. Online gaming competition "MOBI-GAMER" was conducted on 12th march 2022. The games included in the tournament are: Ludo King, Chess, Battleground Mobile (BGMI), Call of Duty Mobile (CODM). The winners of the different games are: Ludo King – Souhard Singh, Chess – Sumit Sharma, Battleground Mobile (BGMI) – Top Shooterz, Call of Duty Mobile (CODM) – Team Khatarnak.

4. A workshop on Latest Technologies: Machine Learning organized by Department of Computer Science & Engineering in collaboration with Cetpa, Roorkee on 16th April 2022.
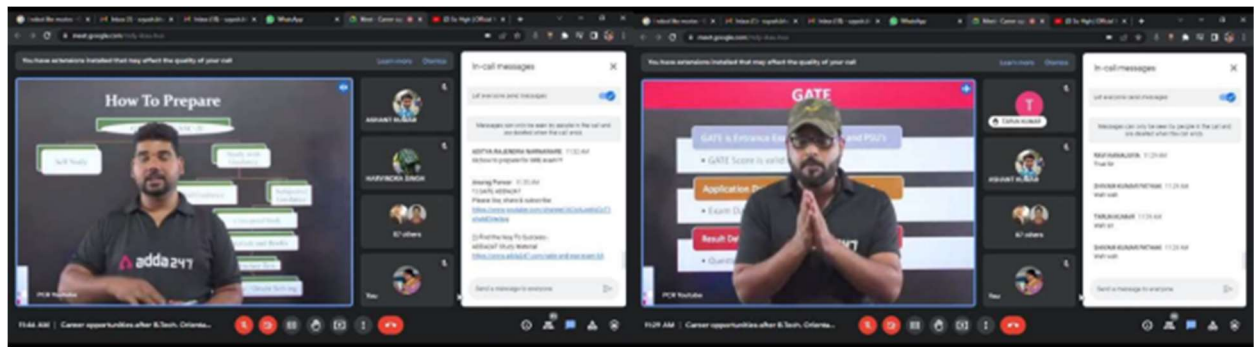

5. A Fresher Party namely "INTROx 2022" was given to 1st year students by senior students on 10th May 2022.

6. Expert Lecture under theme innovation and Learning was organized by FET(GKDU) on 14th May 2022 at the campus of F.E.T(GKDU) .The event was attended by the faculty members of F.E.T. and students of Batch -23,24,25 of all respective branches had actively participated in the event .

7. Career After B.Tech Workshop on Career Counselling was Conducted in department of CSE on 4 june 2022 in collaboration with ADDA 24 x7. Mr. Yogesh kumar from ADDA 24x7 trained the students to test their skills and have a positive attitude towards the competitive exams. Dr. Suyash Bhardwaj Coordinated the session.

8. Training and Career Orientation workshop was conducted in the department of CSE on 16 June 2022 in collaboration with NIIT. The experts from the NIIT informed the students about the latest technologies that are used in the companies now a days. The workshop was a great success with huge participation of the students and faculty members. The workshop was coordinated by Dr. Suyash Bhardwaj.