BABU BANARASI DAS
NORTHERN INDIA INSTITUTE OF TECHNOLOGY
(Formerly Known as Northern India Engineering)

(Recognized by AICTE, Govt. of India, affiliated to Dr. A.P.J. Abdul Kalam Technical University, Lucknow) AKTU College Code - 056

CAMPUS DRONE

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INSTITUTE VISION

To establish a multi-disciplinary environment with excellence in technical education and research for developing competent professionals who meet the challenges of industrial and societal development with human values and ethics.

INSTITUTE MISSION

- To provide an excellent environment with supporting infrastructure to prepare globally competent professionals acceptable to industry and society.
- To inculcate a spirit of research, innovation and entrepreneurship by exposing multi-disciplinary approach.
- To motivate aspiring graduates to solve real life problems with zeal of lifelong learning.
- To imbibe a healthy environment which helps to develop intellectual capabilities among graduates to transform them into professionals with Indian values and ethics.

DEPARTMENT VISION

To provide a conducive environment for learning and create research opportunities in the field of Computer Science and Engineering to meet global requirements using the latest technologies with ethical values.

DEPARTMENT MISSION

- To provide theoretical and practical concepts across the Computer Science discipline.
- To impart an education that is well suited to meet the challenging software needs of the industry.
- To nurture the undergraduate students with multi-disciplinary and research activities to grow as professionals.
- To empower students with moral and ethical values

PROGRAMME EDUCATIONAL OBJECTIVES

PEOS

The Program Educational Objectives (PEOS) of the Computer Science and Engineering are listed below:

PEO1: To encourage students to strengthen their technical capabilities for providing solutions to meet industrial and societal needs.

PEO2: To groom graduates as professional engineers to work with leadership and problem solving skills.

PROGRAMME OUTCOMES

POS

At the end of this program, graduates will be able to:

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling too complex engineering activities with an understanding of the limitations.
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PROGRAMME SPECIFIC OUTCOMES

PSO's
On completion of the B.Tech. Computer Science & Engineering degree the graduates will be able to:
PS01: Ability to design and develop solutions for societal problems by using emerging technologies and standardized emerging principles.
PSO2: Develop and understanding for conceptual and practical aspects of programming languages with databases and develop solutions using suitable data structures and algorithmic techniques.

LATE BABU BANARASI DAS JI'S VISION

Late Babu Banarasi Das Ji
(1912-1985)
Ex Chief Minister
Govt. of Uttar Pradesh

"To provide an open opportunity to the young generation for evolving their core competencies and to build their career as world class professionals with broad based foundation, in-depth knowledge & versatile personality to meet the challenges of Global Economy..."

- Babuji's Vision..

FOUNDER'S MESSAGE

The Founder
Dr. Akhilesh Das Gupta Ji
MBA, LLB, Ph.D.
Ex-Member of Parliament (Rajya Sabha)
Minister for Steel
Hon'ble Founder Ex-Chairman, BBD Group

"We not only make technocrats at BBD, we churn out citizens of the world, perfect in all respect, be it leadership, competence, confidence, communication, moral and knowledge..."

-Akhilesh Das Gupta's Vision.

CHAIRPERSON'S MESSAGE

Teaching is a very noble profession that shapes the character, caliber, and future of an individual as education is the most powerful weapon which you can use to change the world
A heartfelt thank you to all the teachers who spend their time,
energy, and love to care to educate our children. Happy Teachers Day.

- Alka Das

MRS. ALKA DAS
M.B.A., L.L.B.
Advocate & Social Worker
Chairperson, BBD Group

PRESIDENT'S MESSAGE

Mr. Viraj Sagar Das, who can be best described as a man of vision and integrity, is a guiding force for all institutions and organizations of the BBD Group. With his genuine enthusiasm and unwavering dedication for organizational growth he is advocating engagement, inclusivity and respect for all since he took over as the President of BBD Group.

- Viraj Sagar Das

Mr. Viraj Sagar Das
President, BBD Group

Director's MESSAGE

Prof. (Dr.) V. K. Singh
Director(Engg.)

It gives me an immense pleasure to introduce Babu Banarasi Das Northern India Institute of Technology (BBDNIIT), Lucknow to all the aspiring engineering students. Since the inception of this great institution, the aim is to provide quality technical education and develop competent technocrats who are socially sensitive and committed to excellence at global arena. In accordance with this aim, we have a set of selected faculty members delivering academic contribution for achieving excellence in technical education.

The institute has a glorious standing of more than 17 years now and continue to evolve as the most reputed educational group in the field of Engineering. BBDNIIT is known for its process, academic and infrastructural facilities geared towards achieving academic excellence. We aspire to develop professionally groomed manpower with sound knowledge and skill, a passion for the engineering profession, uncompromising human values and ethics. Through our systematic teaching-learning process we prepare them for a challenging career ahead. A great emphasis is laid on strengthening their relationship with the community and motivate them to contribute significantly to society.

The unique blend of state-of-the-art infrastructure of the college and its strong team of experienced and dedicated faculty ardently nurture talent in young minds. The college is well positioned to create a conducive atmosphere for the development of young brains into bright professionals of future.

The global technology scenario is changing rapidly. To remain competitive in this changing environment, there is an increasing demand for professionals who can face the new challenges. The BBDNIIT has been established to train the students so that they meet challenges head on. In the short duration of this existence the Institute has achieved a prominent place amongst the top ranking engineering colleges. Towards our vision of creating a thinking professional order, we continue to aim at newer heights and excellence in the field of professional education.

We are committed to nurturing juvenile minds and preparing them for challenges in today's globalised technology. The doors of our faculty members are always open for any student who seeks help. We persuade all the students to use their time with professors and teaching staff fruitfully, to develop their own proficiency.

"Develop a passion for learning. If you do, you will never cease to grow."

- Anthony J. D'Angelo

"Education is the most powerful weapon which you can use to change the world."

– Nelson Mandela

DEPARTMENT FACULTY & STUDENT ACHIEVEMENTS

Name of the Faculty	Title of FDP	Organized By	Duration	Mode
Dr. Anurag Shrivastava	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
Dr. Komal Asrani	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
Mr. Uttam Kumar Singh	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
Mr. Satendra Kumar Vishwakarma	Designing and Modelling of IOT,AI & ML System	Designing and Modelling of IOT,AI & ML System	01/08/2022 to 5/08/22(One Week)	Online
Mr. Kapil Verma	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
Mr. Yousuf Haider	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	online
Mr. Yousuf Haider	National Intellectual property Awareness Mission	Intellectual property office and MOE's Innovation Cell India	11/07/2022(One Day)	Offline
Mr. Sameer Awasthi	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022 (One Week)	online
Mr. Yusuf Khan	National Intellectual property Awareness Mission	Intellectual property office and MOE's Innovation Cell India	11/07/2022(One Day)	Offline
Mr. Atma Prakash Singh	National Intellectual property Awareness Mission	Intellectual property office and MOE's Innovation Cell India	11/07/2022(One Day)	Offline
	Unblock Blockchain	Ajay Kumar Garg Engineering College (AKGEC)	01/08/2022 to 5/08/22(One Week)	Online
	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
Ms. Abhilasha Gupta	National Intellectual property Awareness Mission	Intellectual property Office and MoE's Innovation Cell,India	11/07/2022 (1 day)	Offline
	Unblock Blockchain	AKGEC,Gaziabad	01/08/2022 to 5/08/22(One Week)	Online
	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
Ms. Sweta Singh	Unblock Blockchain	Ajay Kumar Garg Engineering College (AKGEC)	01/08/2022 to 5/08/22(One Week)	Online
	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
	National Intellectual property Awareness Mission	Intellectual property Office and MoE's Innovation Cell,India	11/07/2022 (1 day)	Offline
Ms. Shuchi Sharma	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
Ms. Nancy Vaish	National Intellectual property Awareness Mission	Intellectual property office and MOE's Innovation Cell India	11-07-2022	Offline
Mr. Vikas Porwal	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online
	National Intellectual Property Awareness Mission	Intellectual property office and MOE's Innovation Cell India	11/07/2022 (1 day)	Offline
Mr. Puneet Shukla	National Intellectual Property Awareness Mission	Intellectual property office and MOE's Innovation Cell India	11/07/2022 (1 day)	Offline
	Designing and Modelling of IOT,AI & ML System	All India Council for Technical Education (AICTE), Arm Education and STMicroelectronics	01/08/2022 to 5/08/22(One Week)	Online

Journal / Conference Research Papers	
1	**Umesh Dwivedi, "**Deep Learning with Metaeuristics based Data Sensing and Encoding Scheme for Secure Cyber Physical Sensor Systems**",** in the **ESCI (Springer)** journal "Cluster Computing The Journal of Networks, Software Tools and Applications" an Open Access SCI-E indexed Journal and Scopus Journal, Volume 4, Issue 4, August 2022 withISSN No.1573-7543, DOI: https://doi.org/10.1007/s10586-022-03654-8
2	**Krishna Kumar Joshi, "**Deep Learning with Metaeuristics based Data Sensing and Encoding Scheme for Secure Cyber Physical Sensor Systems**",** in the **ESCI (Springer)** journal "Cluster Computing The Journal of Networks, Software Tools and Applications" an Open Access SCI-E indexed Journal and Scopus Journal, Volume 4,Issue 4, August 2022 with ISSN No.1573-7543, DOI: https://doi.org/10.1007/s10586-022-03654-8
3	**Anurag Shrivastava**, "Improving the Assessment of Requirements Engineering Process Capability", High Technology Letters (HTL) Journal, Peer ReviewInternational Journal, Volume-28, Issue 6, June 2022, indexed in SCOPUS,Publisher : Science Press, ISSN: 1006-6748
4	Kshitiz Srivastavaa , Namrata Dhandab and **Anurag Shrivastava** "Optimization of WindowSize for Calculating Semantic Coherence Within an Essay", Advances in Distributed Computing and Artificial Intelligence Journal (ADCAIJ), Volume-11 No. 2 (2022), pp. 145-156. Indexed in **Emerging Sources Citation Index (ESCI)** of **Thomson Reuters.**
5	**Umesh Dwivedi,** A. Eshmawu, Mashael Khayyat, S. Abdel-Khelak, Romany Mansour, Krisha Kumar Joshi, Deepak Gupta, **"**Deep Learning with Metaeuristics based Data Sensing and Encoding Scheme for Secure Cyber Physical Sensor Systems**",** in the **SCI(Springer)** journal "Cluster Computing The Journal of Networks, Software Tools and Applications" an Open Access SCI-E indexed Journal and Scopus Journal, Volume 4, Issue 4,, December 2021 with ISSN No.1573-7543.
6	**Dr. Umesh Dwivedi,** Tushar, Satyam Gupta, Shivam Kumar Upadhyay, Yogendra Shukla, Saloni Ahuja "Automatic Speech Recognition System Using Hybrid Hidden Markov Model and Human Emotion Recognition System" in Elsevier SSRN (Social Science Research Network) through international Conference "International Conference on Innovative Computing & Communication (ICICC) 2022".
7	"Deep Learning Models for Object Recognition and Surveillance" authored by **Atma Prakash Singh**, BBDNIIT, Lucknow has been accepted for publication in SciTePress by International Conference on Emerging Trends in IoT and Computing Technologies-2022 atGITM,Lucknow. (Scopus Indexed)
8	"Image and its coordinates detection in Convolution Neural Network using YOLO Framework" **Abhilasha Gupta, Krishna Kumar Joshi, Dr. Umesh Dwivedi** Chapter published under Springerpublication book entitled "International Conference on Computervision and Robotics (CVR 2022 MAY)
9	**Abhilasha Gupta,**"Prediction Based Data Accumulation Algorithm in Cellular SensorNetwork", SCI paper accepted under ELSEVIER SSRN series. 30, May 2022
10	**Satendra Kumar Vishwakarma**, "Prediction Based Data Accumulation Algorithm inCellular Sensor Network'' Accepted in Elsevier SSRN 30, May 2022
11	**Uttam Kumar Singh**, "Prediction Based Data Accumulation Algorithm in Cellular SensorNetwork'' Accepted in Elsevier SSRN 30, May 2022
12	**Sweta Singh**, "Prediction Based Data Accumulation Algorithm in Cellular Sensor Network''Accepted In Elsevier SSRN 30, May 2022
13	**Krishna Joshi,** Deepak Gupta, A. Eshmawu, Mashael Khayyat, S. Abdel-Khelak, RomanyMansour- **"**Deep Learning with Metaeuristics based Data Sensing and Encoding Scheme for Secure Cyber Physical Sensor Systems**",** in the **SCI (Springer) journal "**Cluster Computing The Journal of Networks**,** Software Tools and Appliations" an Open Access SCI-E indexed Journal and Scopus Journal, Volume 4, Issue 4, December,2021 with **ISSNNo.1573-7543**.
14	**Krishna Kumar Joshi et al**, "Prediction Based Data Accumulation Algorithm in CellularSensor Network", SCI paper accepted under **ELSEVIER SSRN** series. 30, May 2022.
15	**Krishna Kumar Joshi et al**, "Images and Its Coordinates Detection in Convolution Neural Network using YOLO Framework", Chapter published under Springer publication book entitled **"**International Conference on Computer vision and Robotics (CVR 2022)"
16	**Vikas Porwal**, Kajal Singh, Dr. Nikhat Akhtar, Sunil Kumar Singh, Versha Verma, "Stroke Robotics for Functional Recovery", 2022, "International Conference on Emerging Trends in IoT and Computing Technologies-2022"

Name of the Faculty	Title of FDP	Organized By	Duration	Mode
Dr.Anurag Srivastava	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022 (One Week)	Online
	NEP 2020 Implementation in Higher Education Institutes	NITTR,Chandigarh	09-13 May 2022	
	Data Analysis using Advance Excel	E&ICT Academy, IIT Kanpur	1 – 7 Feb 2022	
	Emerging Trends and advances in computational Intelligence	BBD NITM, Lucknow	28 Feb – 5 Feb 2022	
	Computational Intelligence : COIN 2022	BBD NIIT,Lucknow	16 – 20 Feb 2022	
Ms. Sweta Singh	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022	Online
	a2z of NBA Accreditation Process	Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Indraprastha Engineering College, Ghaziabad, Uttar Pradesh, India	24 August- 09 September 2021	
	Building data science applications with python	RKGIT, Ghaziabad	7-11 September 2021	
	Empowering Social Life using Artificial Intelligence	Artificial Intelligence Foundation Trust, India and International Association for Responsible Artificial Intelligence in association with BBD Northern India Institute of Technology, Lucknow, India	21-25 July 2021.	
	Artificial Intelligence and ML technique	Institutions innovation council, BBD engineering college , Lucknow	04-08 October 2021	

Ms. Abhilasha Gupta	a2z of NBA Accreditation Process	Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Indraprastha Engineering College, Ghaziabad, Uttar Pradesh, India	24 August- 09 September 2021	Online
	Empowering Social Life using Artificial Intelligence	Artificial Intelligence Foundation Trust, India and International Association for Responsible Artificial Intelligence in association with BBD Northern India Institute of Technology, Lucknow, India	21-25 July 2021.	
Ms. Shraddha Tiwari	a2z of NBA Accreditation Process	Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Indraprastha Engineering College, Ghaziabad, Uttar Pradesh, India	24 August- 09 September 2021	Online
	Building data science applications with python	RKGIT,Gaziabad	7-11 September 2021	
Dr. Umesh Dwivedi	A2z of NBA Accreditation Process	Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Indraprastha Engineering College, Ghaziabad, Uttar Pradesh, India	24 August- 09 September 2021	Online
Ms. Shuchi Sharma	Learn and build on AI application on real Datasets	Dr. Akhilesh das Gupta institute (ADGITM) new Delhi.	22 -27 November 2021	Online
Mr. Shantanu Pant	Empowering Social Life using Artificial Intelligence	Artificial Intelligence Foundation Trust, India and International	21-25 July 2021.	

		Association for Responsible Artificial Intelligence		Online
		in association with BBD Northern India Institute of Technology, Lucknow, India		
	Artificial Intelligence and ML techniques	Institutions innovation council, BBD engineering college ,Lucknow	04-08 October 2021	
	.			
	Machine Learning using Python Programming	AI foundation trust and IARAI.	23 August – 23 September 2021	
	Empowering Social Life using Artificial Intelligence	Artificial Intelligence Foundation Trust, India and International Association for Responsible Artificial Intelligence	21-25 July 2021.	
		in association with BBD Northern India Institute of Technology, Lucknow, India		
Dr. Komal Asrani	Entrepreneurship Innovations and digital skills in new era of AI	MIT, Moradabad	25/06/2022 to 29/07/2022	Online
	Trends in Innovation, Design Thinking & IPR	MIT, Moradabad	30th May-03rd June,2022	
	Data Analysis using Advance Excel	E&ICT Academy, IT Kanpur	01-07 Feb 2022	
	Emerging Trends and advances in computational Intelligence Computational Intelligence : COIN 2022	BBD NITM,Lucknow BBDNIIT,Lucknow	28 Feb – 5 Feb 2022 16 – 20 Feb 2022	

Mr. Kripa Shankar Pathak	NEP 2020 Implementation in Higher Education Institutes	NITTR,Chandigarh	09-13 May 2022	Online
	Next Generation AI Technique And Application	AI Research Centre,BBD University	8 – 13 Feb 2022	
	Emerging Trends andadvances in computational Intelligence	BBDITM,Lucknow	28 Feb – 5 Feb 2022	
	Computational Intelligence : COIN 2022	BBDNIIT,Lucknow	16-20 Feb 2022	
Mr.Uttam Kumar Singh	Data Analysis using Advance Excel	E & ICT Academy,IIT Kanpur	1 – 7 Feb 2022	Online
	Next Generation AI Technique And Application	AI Research Centre BBD University	8 – 13 Feb 2022	
	Emerging Trends in Data Analytics 2022	Amity University	17 – 21 Feb 2022	
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022 (One Week)	
Mr. Satendra Kumar Vishwakarma	Data Analysis using Advance Excel	E & ICT Academy, IIT Kanpur	1 – 7 Feb 2022	Online
	Next Generation AI Technique And Application	AI Research Centre BBD University	8 – 13 Feb 2022	
	Emerging Trends in Data Analytics 2022	Amity University	17 – 21 Feb 2022	
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022 (One Week)	
Mr.Waseem Ahmad	Data Analysis using Advance Excel	E & ICT Academy, IIT Kanpur	1 – 7 Feb 2022	

	Next Generation AI Technique And Application	AI Research Centre BBD University	8 – 13 Feb 2022	Online
	Emerging Trends and advances in computational Intelligence	BBD NITM, Lucknow	28 Feb – 5 Feb 2022	
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
Mr. Kapil Verma	Trends in Innovation, Design Thinking & IPR	MIT,Moradabad	30th May-03rd June,2022	Online
	NEP 2020 Implementation in Higher Education Institutes	NITTR,Chandigarh	09-13 May 2022	
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
Mr. Yousuf Haider	Machine Learning and Data Science using Python : Hands-on Approach	National Institute of Technology, Jalandhar	24-28th June 2022	Online
	NEP 2020 Implementation in Higher Education Institutes	NITTR,Chandigarh	09-13 May 2022	
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
	Next Generation AI Technique And Application	AI Research Centre BBD University	8 – 13 Feb 2022	
	Data Analytics, Big Data, Machine Learning and applications	Bansal Institute of Engg. & Tech., Lucknow	21 – 26 feb 2022	
Mr. Yusuf Khan	NEP 2020 Implementation in Higher Education Institutes	NITTR,Chandigarh	09-13 May 2022	Online
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
	Data Analytics, Big Data, Machine Learning and applications	Bansal Institute of Engg. & Tech., Lucknow	21 – 26 feb 2022	
	Cyber Security	E& ICT Academy ,IIT Kanpur	05-10th July 2021	
	Data Analysis using Advance Excel	E & ICT Academy, IIT Kanpur	1 – 7 Feb 2022	
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	Online

Mr. Sameer Awasthi	Cyber Security	SRMT,Gaziabad	25-29 October 2021	Online
	Machine Learning and Data Science using Python : Hands-on Approach	National Institute of Technology, Jalandhar	24-28th June 2022	
Mr. Krishna Kumar Joshi	Data Analysis using Advance Excel	E & ICT Academy, IIT Kanpur	1 – 7 Feb 2022	Online
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
Mr. Atma Prakash Singh	Trends in Innovation, Design Thinking & IPR	MIT, Moradabad	30th May-03rd June,2022	Online
	Data Analysis using Advance Excel	E & ICT Academy, IIT Kanpur	1 – 7 Feb 2022	
	Outcome Based Teaching Learning Process	IAMR, Ghaziabad	7 – 9 Feb 2022	
	Next Generation AI Technique And Application	AI Research Centre BBD University	8 – 13 Feb 2022	
	Emerging Trends and advances in computational Intelligence	BBD ITM, Lucknow	28 Feb – 5 Feb 2022	
	Emerging Technological Information in computer Science	Ambalika Institute Of Management & Technology, Lucknow	21 -26 Feb 2022	
	Computational Intelligence : COIN 2022	BBD NIIT, Lucknow	16 – 20 Feb 2022	
	Integration of Renewable Energy and Smart Grids For smart Cities	Bansal Institute of Eng. & Tech., Lucknow	7 – 12 March 2022	
	A2z of NBA Accreditation Process	Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Indraprastha Engineering College, Ghaziabad, Uttar Pradesh, India	24 August- 09 September 2021	

	Learn and build on AI application on real Datasets	Akhilesh Das Gupta institute (ADGITM) new Delhi.	22-27 November 2021	
Ms. Sweta Singh	Trends in Innovation, Design Thinking & IPR	MIT, Moradabad	30th May-03rd June,2022	Online
	Data Analysis using Advance Excel	E & ICT Academy, IIT Kanpur	1 – 7 Feb 2022	
	Outcome Based Teaching Learning Process	IAMR, Ghaziabad	7 – 9 Feb 2022	
	Next Generation AI Technique And Application	AI Research Centre BBD University	8 – 13 Feb 2022	
	Emerging Trends and advances in computational Intelligence	BBD ITM, Lucknow	28 Feb – 5 Feb 2022	
	Computational Intelligence : COIN 2022 a2z of NBA Accreditation Process	BBD NIIT, Lucknow Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Inderprastha Engineering College, Ghaziabad, Uttar Pradesh, India	16 – 20 Feb 2022 24 August- 09 September 2021	
Ms. Abhilasha Gupta	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022	Online
	a2z of NBA Accreditation Process	Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Inderprastha Engineering College, Ghaziabad, Uttar Pradesh, India	24 August- 09 September 2021	

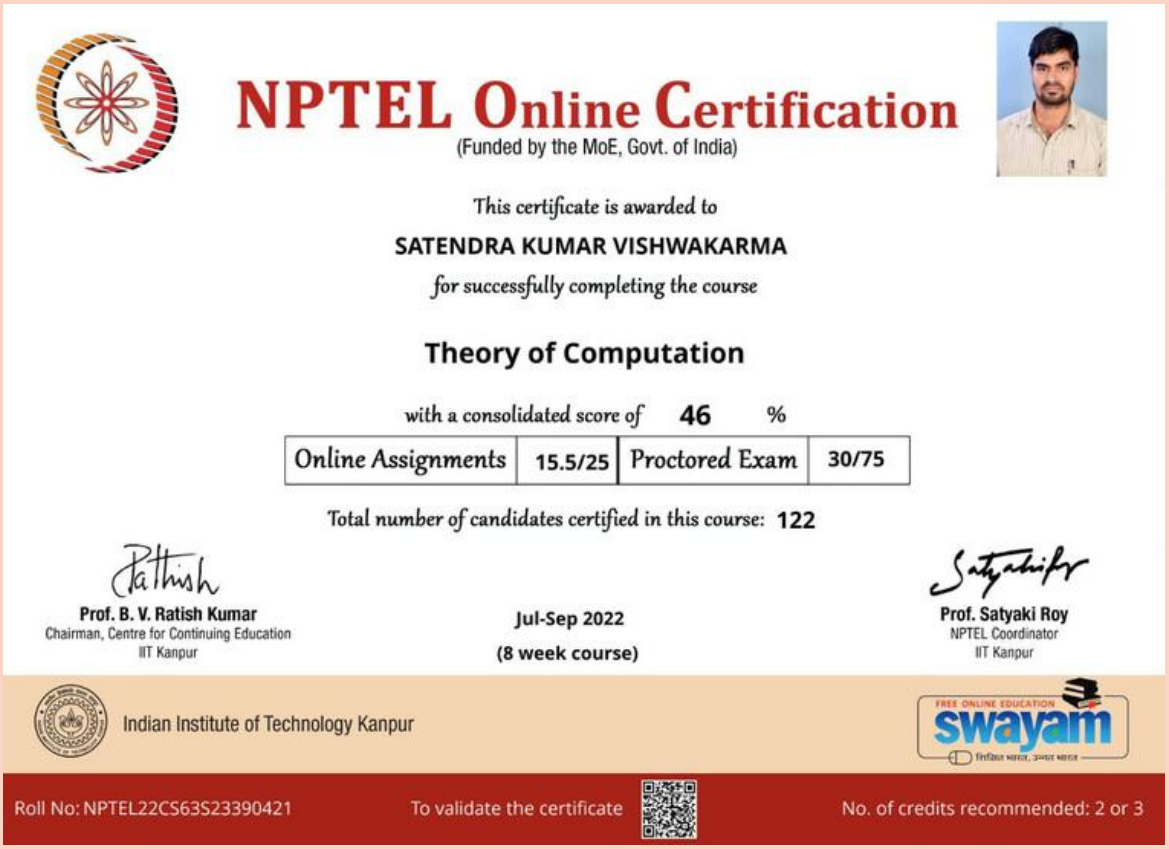
	Empowering Social Life using Artificial Intelligence	Artificial Intelligence Foundation Trust, India and International Association for Responsible Artificial Intelligence in association with BBD Northern India Institute of Technology, Lucknow, India	21-25 July 2021.	
Ms. Shraddha Tiwari	a2z of NBA Accreditation Process	Department of Electronics & Communication Engineering, Internal Quality Assurance Cell (IQAC), Indraprastha Engineering College, Ghaziabad, Uttar Pradesh, India	24 August- 09 September 2021	
	Building data science applications with python	RKGIT,Gaziabad	7-11 September 2021	
Ms. Shuchi Sharma	Learn and build on AI application on real Datasets	Dr. Akhilesh Das Gupta institute (ADGITM) new Delhi.	22 -27 November 2021	Online
	Empowering Social Life using Artificial Intelligence	Artificial Intelligence Foundation Trust, India and International Association for Responsible Artificial Intelligence in association with BBD Northern India Institute of Technology, Lucknow, India	21-25 July 2021.	
	Artificial Intelligence and ML techniques .	Institutions innovation council, BBD engineering college ,Lucknow	04-08 October 2021	

Mr. Shantanu Pant	Machine Learning using Python Programming	AI foundation trust and IARAI.	23 August – 23 September 2021	Online
	Empowering Social Life using Artificial Intelligence	Artificial Intelligence Foundation Trust, India and International Association for Responsible Artificial Intelligence	21-25 July 2021.	
		in association with BBD Northern India Institute of Technology, Lucknow, India		
	NEP 2020 Implementation in Higher Education Institutes	NITTR Chandigarh	9-13th May 2022	
	Machine Learning and Data Science using Python : Hands-on Approach	National Institute of Technology, Jalandhar	24-28th June 2022	
Mr. Vikas Porwal	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022	Online
Ms. Nancy Vaish	Biomedical Signal and Image Processing	NITTTR,Chandigarh	20/06/2022 to 24/06/2022	Online

PATENT RECORDS

S. No.	Name of Patent Holder	Title of Innovation	Details
1.	Dr.Umesh Dwivedi	Bioinformatics model for task assignment and fault removal in cloud architecture	Application number:-202111043243 Publication date (u/s 11a) :-15/10/2021
2.	1.Dr. Umesh Dwivedi 2. Sameer Awasthi 3.Waseem Ahmad	Sign language recognition for hindi varnamala	Application number:-202211041200
3.	Mr.Waseem Ahmad	Smart system for meeting minute generation using artificial intelligence and machine learning	Application number:- 202022101429
4.	Mr.Waseem Ahmad	E-commerce system for method of producing ,selling and distributing articles of manufacture	Application number:-202241007328 Publication date :-18/02/2022

NPTEL CERTIFICATES



NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to

SATENDRA KUMAR VISHWAKARMA

for successfully completing the course

Theory of Computation

with a consolidated score of **46** %

Online Assignments	15.5/25	Proctored Exam	30/75

Total number of candidates certified in this course: **122**

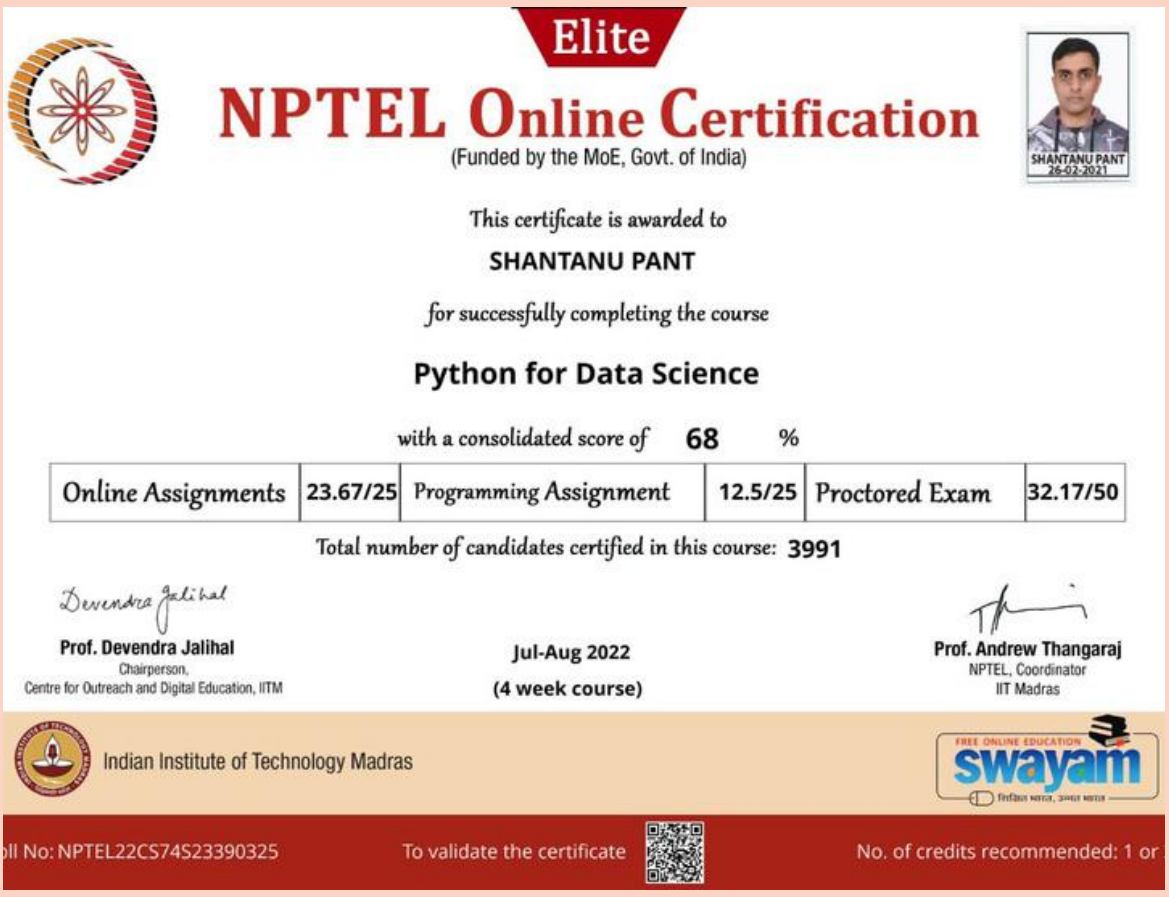
Prof. B. V. Ratish Kumar
Chairman, Centre for Continuing Education
IIT Kanpur

Jul-Sep 2022
(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

Roll No: NPTEL22CS63S23390421 To validate the certificate No. of credits recommended: 2 or 3



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Prof. Devendra Jalihal
Chairperson,
Centre for Outreach and Digital Education, IITM

Jul-Aug 2022
(4 week course)

Prof. Andrew Thangaraj
NPTEL, Coordinator
IIT Madras

Indian Institute of Technology Madras

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TECHNICAL ARTICLES

2022-2023

ARTIFICIAL INTELLIGENCE

AI technology has a long history which is actively and constantly changing and growing. It focuses on intelligent agents, which contain devices that perceive the environment and based on which take actions to maximize goal success chances. In this paper, we will explain the modern AI basics and various representative applications of AI. In the context of the modern digitalized world, Artificial Intelligence (AI) is the property of machines, computer programs, and systems to perform the intellectual and creative functions of a person, independently find ways to solve problems, be able to conclude, and make decisions. Most artificial intelligence systems can learn, which allows people to improve their performance over time. The recent research on AI tools, including machine learning, deep learning, and predictive analysis intended toward increasing the planning, learning, reasoning, thinking, and action-taking ability.

The term intelligence refers to the ability to acquire and apply different skills and knowledge to solve a given problem. In addition, intelligence is also concerned with the use of the general mental capability to solve, reason, and learn various situations. Intelligence is integrated with various cognitive functions such as; language, attention, planning, memory, and perception. The evolution of intelligence can is studied in the last ten years. Intelligence involves both Human and Artificial Intelligence. In this case, critical human intelligence is concerned with solving problems, reasoning, and learning. Furthermore, humans have simple complex behaviors which they can easily learn in their entire life.

The advantages of artificial intelligence

1. Reduction in Human Error:

One of the biggest advantages of Artificial Intelligence is that it can significantly reduce errors and increase accuracy and precision. The decisions taken by AI in every step are decided by information previously gathered and a certain set of algorithms. When programmed properly, these errors can be reduced to null.

2. Zero Risks:

Another big advantage of AI is that humans can overcome many risks by letting AI robots do them for us. Whether it be defusing a bomb, going to space, or exploring the deepest parts of oceans, machines with metal bodies are resistant to nature and can survive unfriendly atmospheres. Moreover, they can provide accurate work with greater responsibility and not wear out easily.

The disadvantages of artificial intelligence

1. High Costs:

The ability to create a machine that can simulate human intelligence is no small feat. It requires plenty of time and resources and can cost a huge deal of money. AI also needs to operate on the latest hardware and software to stay updated and meet the latest requirements, thus making it quite costly.

2. Unemployment:

One application of artificial intelligence is a robot, which is displacing occupations and increasing unemployment (in a few cases). Therefore, some claim that there is always a chance of unemployment as a result of chatbots and robots replacing humans.

From the above paper, it is clear, that AI, without any doubt, is the future of India, with a great number of employment opportunities, and promising careers, and therefore, students with a knack for science and technology, must be encouraged to pursue this field of Artificial Intelligence, and help the world, achieve bigger and better feats in technology, with the power to revolutionize the world we live in.

Aman Chandra
Btech(CSE)
2021-25

INTERNET OF THINGS

The internet of things(IoT)describes the network of physical objects “things” that are embedded with sensors, software, and others to connect and exchange data with other devices and systems over the internet. The Internet of things is the networking of physical objects that contain electronics embedded within their architecture to communicate and sense interactions amongst each other or concerning the external environment. In the upcoming years, IoT-based technology will offer advanced services and practically change how people lead their daily lives. Advancements in medicine, power, gene, therapies, agriculture, smart cities, and smart homes are just a very few of the categorical examples where IoT is strongly established. IoT is the network of interconnected computing devices embedded in everyday objects, enabling them to send and receive data. Over the past few years, It has become one of the most important technologies of the 21st century. Now that we can connect everyday objects kitchen appliances, cars, thermostats, and baby monitors to the internet via embedded devices, seamless communication is possible between people, processes, and things.

The main advantages and disadvantages of technology are--It can assist in the smarter control of homes and cities via mobile phones. It enhances security and offers personal protection.--By automating activities, it saves us a lot of time.--Information is easily accessible, even if we are far away from our actual location, and it is updated frequently in real-time.--Personal assistance can be provided by IoT apps, which can alert you to your regular plans.--Electric devices are directly connected. They communicate with a controller computer, such as a cell phone, resulting in efficient electricity use. As a result, there will be no unnecessary use of electrical equipment.--It minimizes human effort because IoT devices connect and communicate with one another and perform a variety of tasks without the need for human intervention.--Asset tracking, traffic or transportation tracking, inventory control, delivery, surveillance, individual order tracking, and customer management can all be made more cost-effective with the right tracking system. Now, the disadvantages are—Hackers may gain access to the system and steal personal information. Since we add so many devices to the internet, there is a risk that our information can be misused.—They rely heavily on the internet and are unable to function effectively without it.—With the complexity of systems, there are many ways for them to fail. —We lose control of our lives, our lives will be fully controlled and reliant on technology.— Overuse of internet and technology makes people unintelligent they rely on smart devices instead of doing physical work, causing them to become lazy.

Along with exponential growth in connected devices, each thing in IoT communicates packets of data that require reliable connectivity, storage, and security. With IoT, an organization is challenged with managing, monitoring, and securing immense volumes of data and connections from dispersed devices.But this challenge doesn’t have to field. be a roadblock in a cloud-based environment. In addition to scaling and growing a solution in one location, cloud computing enables solutions to scale globally and across different physical locations while lowering communication latency and allowing for better responsiveness from devices in the field

Aawiral Sood
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EMERGING TECHNOLOGY

Emerging Technology commonly refers to technologies that are currently developing, or that are excepted to be available within the next five to ten years, and is usually reserved for technologies that are creating, or excepted to create a significant social or economic effect. Emerging Technology plays a vital role in the modernization of industries. New technologies help in transforming enterprises into a digital world. This technology is mainly helpful in manufacturing energy and mobility markets. Whenever the word technology comes, there is always something new, and the hunt to develop and implement a new technology that could enhance businesses is obstinate. The curiosity to know and seek knowledge about technology and how it will impact the daily lives of the human species.

The main advantages and disadvantages of technology in our lives are- Ease of access to information, Saves time, Ease of mobility, Better communication means, Cost efficiency, Improves management of human resources, Encourage creativity and innovation, and Better learning techniques, they are some basic advantages of technology. Now, the disadvantages areIt affects relationships at work, It can lead to a lack of mentorship, It can cause distractions at work, It poses risks, It can encourage laziness, they are some basic disadvantages of technology. The top trending Emerging technologies are- Artificial intelligence, the Internet of things, Cloud computing, Robotics, Biometrics, Self-driving car, Computer vision, Blockchain, Machine learning, 5G, Cyber security, 3D printing, Electric aircraft, Electric car, Augmented reality and Virtual reality, they are some trending technologies.

Technology has become a crucial part of our society. Without technological advancements, so much of our everyday lives would be drastically different. As technology progresses as society evolves. That being said, progress comes at a price. The price is different for each person and varies based on how much people value technological and scientific advancements in their own lives. In other words, the scientific invention and production of new technology do not ensure its success. Technology's success is highly dependent on society's acceptance or rejection of a product, as well as whether or not any path dependence is involved. Changing technologies benefit consumers in countless aspects of their lives including in the workforce, in communications, in the use of natural resources, and so much more.

Ansh Vishnoi
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2021-25

ROBOTICS

In recent years, robotics has become an increasingly popular field of study and work. Robotics is the branch of engineering that deals with the design, construction, operation, and application of robots. Robots are machines that can be programmed to carry out certain tasks.

There are many different types of robots. Some are used in manufacturing and assembly lines to build products. Others are used in hospitals to assist surgeons or help patients with physical therapy. Still, others are used in warfare or exploration.

The history of robotics goes back centuries. The word “robot” itself comes from a Czech word meaning “forced labor.” Early examples of robots were mechanical devices that were designed to carry out simple tasks such as lifting and moving objects.

The first electronic robot was invented in 1948 by William Grey Walter. His robots, called “tortoises,” were able to sense light and avoid obstacles. In the 1960s, Isaac Asimov popularized the idea of intelligent robots with his science fiction stories about “robots” that followed three laws: 1) A robot may not injure a human being or, through inaction, allow a human being to come to harm; 2) A robot must obey orders given it by human beings except where such orders would conflict with the First Law; 3) A robot must protect its existence as long as such protection does not conflict with the First or Second Law.

Robots are increasingly becoming a staple in many industries, including manufacturing, automotive, food and beverage, pharmaceuticals, and logistics. They have also been used extensively in military and space applications. Despite their growing popularity, there is still much public debate about the use of robots and their effect on humans.

On one hand, it is argued that robots can help to improve efficiency and productivity in various industries. For instance, they can work tirelessly without needing breaks, which can lead to increased output. They can also be used in hazardous environments without putting human workers at risk. In addition, robots can be customized to perform specific tasks quickly and accurately.

On the other hand, some people argue that the increasing use of robots will result in job losses for human workers. As more companies adopt robotics technologies, there will be less need for human employees. This could lead to large-scale unemployment and an increase in social inequality. Additionally, some fear that as robots become more advanced they could eventually replace humans entirely or even become conscious and pose a threat to our very existence.

Overall, the debate around robotics is complex and ongoing. While there are certainly benefits to using robots in various industries, we must also consider the potential risks involved. As technology advances it is important to monitor the impact of robots on society and ensure that any negative effects are mitigated as much as possible

There are some potential demerits to robotics that should be considered. They include:

-Robots can take away jobs from humans. This is particularly true in manufacturing and other industries where robots are increasingly being used to do tasks that humans have traditionally done. This can lead to unemployment and economic hardship for workers who are displaced by robots.
-Robots can be expensive. They require a significant investment upfront, and they also require regular maintenance and repairs. This can be a challenge for businesses, particularly small businesses, to afford.
-Robots can be dangerous. If they malfunction or are not used properly, they can pose a serious risk to people and property. There have been several reports of accidents involving robots in recent years, which has raised concerns about their safety.

There are many benefits to robotics. Robotics can help with manufacturing, agriculture, healthcare, and even disaster response.

Robotics can help speed up manufacturing processes and improve accuracy. They can also help with quality control by making sure products are consistent. In agriculture, robotics can help with tasks such as planting and harvesting. They can also be used to monitor crops and provide information about irrigation and fertilization needs.

In healthcare, robotics can be used for tasks such as surgery and rehabilitation. They can also help with patient care by assisting with activities of daily living such as bathing and dressing. Robotics can also be used in disaster response to the search for survivors in difficult-to-reach places.

Ishika Singh
Btech(CSE)
2021-25

STUDENT ACTIVITY

Student Activity

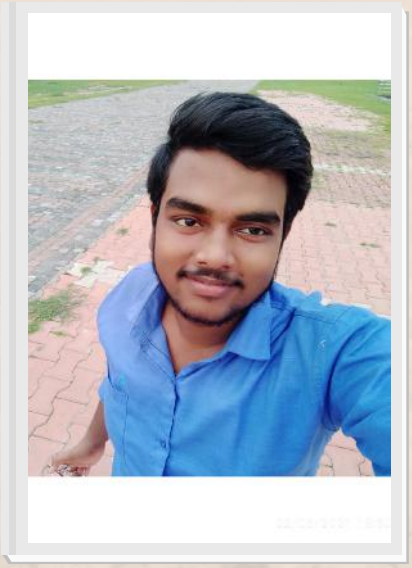
AKTU Zonals

GANESH UTSAV


BBD GROUP
Viraj
Constructions
Best Western

EDITORS

It gives a proud moment for us to present the departmental magazine. This year had been full of various activities by students in academics, co-curricular as well as extracurricular. The magazine's purpose is to provide a platform for the students to express their original creativity and thoughts; thus, it is an important aspect to develop their personality. We would like to place our special thanks to all those, who have contributed to making this effort success Our heartfelt thanks to Sir Yousuf Haider, Our coordinator, for his guidance which enabled us to bring out this magazine. Last but not least we are thankful to all the authors who have sent their articles and readers who made this magazine so enjoyable.



Aman Chandra
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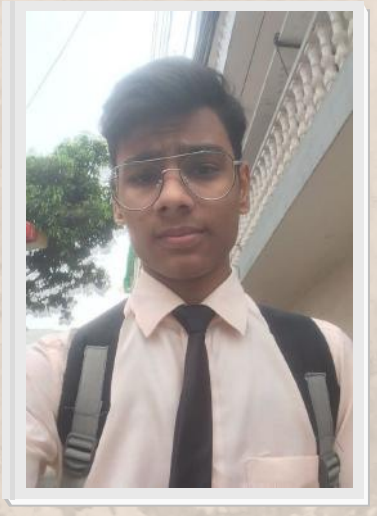

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