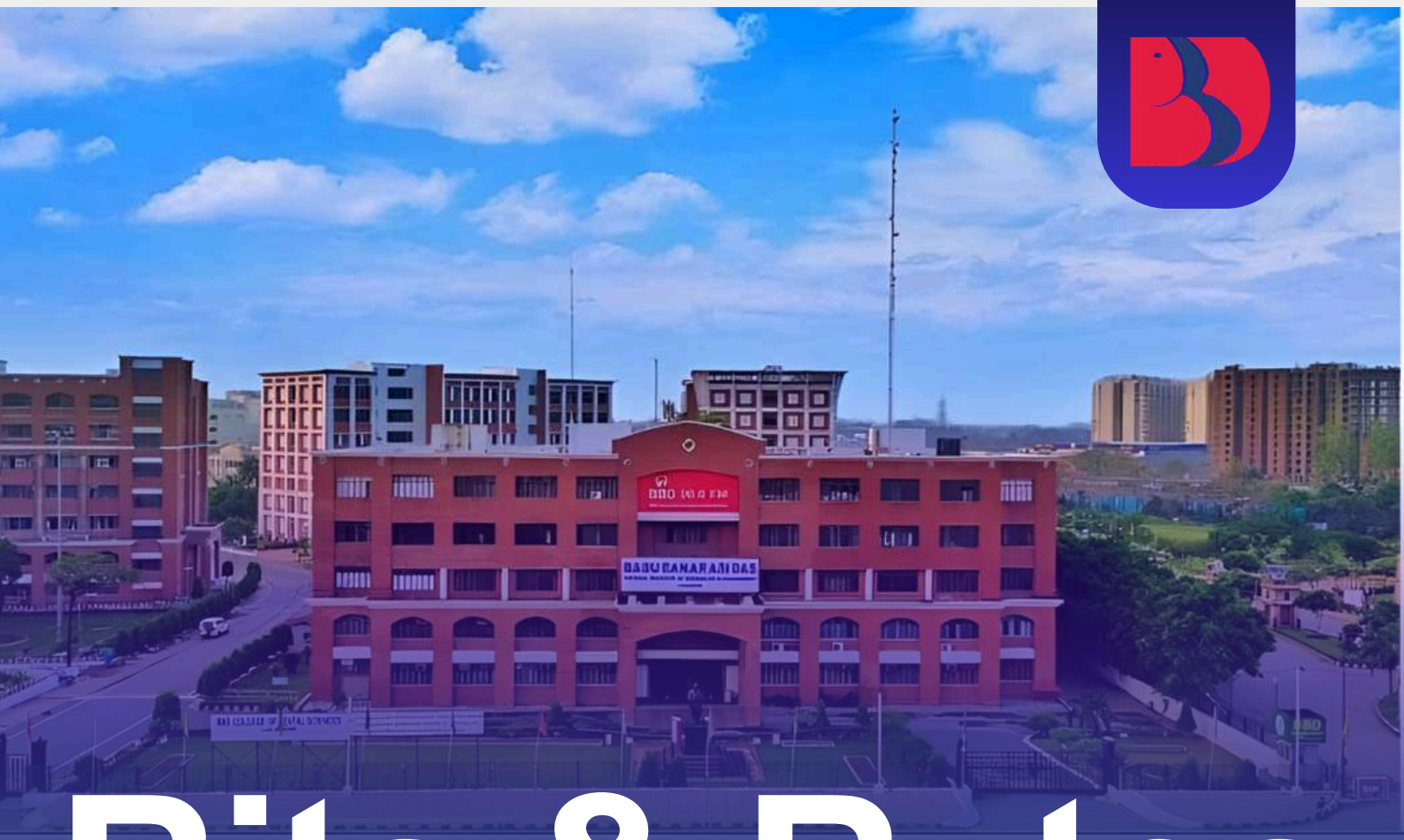
BBDITM

AKTU Code - 054



Bits & Bytes

MAGAZINE

DEPARTMENT OF CSE

June

2024 - 2025

Accredited by

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OF ACCREDITATION

www.bbdnitm.ac.in

BBD City, Ayodhya Road, Lucknow, UP-226028, India

BBDITM

DEPARTMENT
OF C.S.E.

- With the passage of time and expansion, the department has succeeded in carving out a place of distinction not just inside the institution, but also among its peers across the country.

- It has attracted bright students from all over the country for quality education in computer science and engineering. The department provides a vibrant educational environment.

- Students studying computer science at the BBDITM are in great demand in the software sector.

- Our alumni work in key national and worldwide software firms like as IBM, TCS, Oracle, Microsoft, Convergeis, Birlasoft, and others.

VISION OF DEPARTMENT

"To produce globally competent professionals having social values and commitment to serve the global needs with the ability to work in an interdisciplinary environment."

MISSION OF DEPARTMENT

- To impart quality education to the students to enhance their ethical, professional and leadership qualities to make them globally competitive.
- To create a conducive environment in which students can explore computational problems and analyze them to identify the optimal solutions.
- To strive for continual enhancement of technical knowledge & innovation through industry interface to accomplish global needs.

BBDITM

VISION OF INSTITUTE

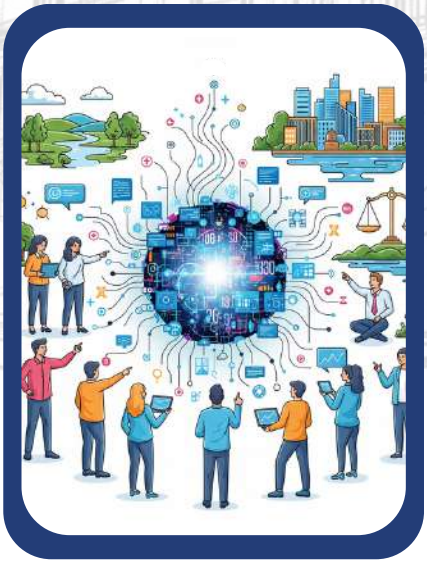
"To become a leading institute of providing professionally competent and socially responsive technocrats with high moral values."

MISSION OF INSTITUE

- **To create an eco-system for the dissemination of technical knowledge, to achieve academic excellence.**
- **To develop technocrats with creative skills and leadership qualities, to solve local and global challenges.**
- **To impart human values and ethics in students, to make them socially and ecofriendly responsible.**

PROGRAM SPECIFIC OUTCOMES (PSOs)

- **Able to design and implement the data structures and algorithms to deliver quality software products.**
- **Able to apply Artificial Intelligence and Machine Learning to solve society - related needs.**



PROGRAM EDUCATIONAL OUTCOMES (PEOs)

- **PEO-1: Problem-Solving and Analytical Thinking:** To apply computing principles to analyze complex problems, design effective solutions, and implement them to meet global standards.
- **PEO-2: Global Competitiveness and Technology Advancement:** To develop cutting-edge technology-driven projects that address global needs, foster a culture of continual enhancement and drive innovative solutions.
- **PEO-3: Sustainable Leadership and Responsible Innovation:** To demonstrate effective leadership, collaboration, and a deep understanding of the societal implications of technology, leading to responsible and sustainable outcomes.

CHERISHING FOUNDERS

Late Babu Banarasi Das Ji

EX CHIEF MINISTER GOVT. 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

(1912 – 1985)

Late Dr. Akhilesh Das Gupta

EX MEMBERPARLIAMENT (RAJYA SABHA) EX - MAYOR LUCKNOWEX - UNION STEEL MINISTER, HONORABLE FOUNDER CHAIRMAN, BBD GROUP, HEAL SO SERVE DAS VICE - PRESIDENT OF BADMINTON SR. VICE PRESIDENT OF INDIAN OLYMPIC ASSOCIATE & PRESIDENT ON BADMINTON ASSOCIATION INDIA.

"We not only make techocrats at BBD, we churn out citizens of the world, perfect in all respect in all respects, be it leadership, competence, confidence, communication, moral or knowledge…" – Akhilesh Das Gupta's Vision.

MRS. ALKA DAS

CHANCELLOR, BBDU, LUCKNOW CO-FOUNDER, BBD GROUP OF EDUCATION ADVOCATE & SOCIAL WORKER

MR. VIRAJ SAGAR DAS

President BBD GROUP, President, UP Badminton Association Vice President, India Badminton Association

PUBLICATIONS
OF FACULTY

- The paper entitled “AI Ethics: Bridging Innovation with Morality” by Saroj Singh, Priyanka Gupta, Amit Kumar Sachan, and Sonam Singh was published in “INTERNATIONAL CONFERENCE ON ADVANCES IN EMERGING TRENDS IN COMPUTER APPLICATIONS (ICAETC-2025)” ISSN No.:3.

- The paper entitled “EduDevOps: The Ultimate CI/CD Corporate DevOps Pipeline Project” by Deepak Pant Published in “INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT (IJSREM)” ISSN No.: 2582-3930.

- Dr. Sangeeta Mishra published the book "Artificial Intelligence and its Influence on Modern Art"(ebook ISBN No.: 978-93-7002-429-8).

- Dr. Sangeeta Mishra authored a book chapter titled “Transforming Digital Transactions” in the book “Smart Contracts and Blockchain” (ISBN No.: 978-93-6294-823-0).

PUBLICATIONS
OF FACULTY

- Ankit Singh published a research paper titled "Influence of Artificial Intelligence on the Evolution of Coding Languages" in IRJET (ISSN: 23950072).

- Dr. Diwakar Yagyasen contributed a book chapter titled "IC Design: An Approach of Study in Bio-Medical and mHealth Care Applications" in Advanced Research in Electronic Devices for Biomedical and mHealth, published on June 14, 2024 (DOI: 10.1201/9781003424666- 8).

- Dr. Sangeeta Mishra published the book "Artificial Intelligence and its Influence on Modern Art"(ebook ISBN No.: 978-93-7002-429-8).

- Richa Verma published the book "Proceedings of International Conference on Recent Innovations in Computing" (eBook ISBN: 978- 981-97-7862-1, Print ISBN: 978-981-97-7861-4).

PUBLICATIONS
OF FACULTY

- Richa Verma presented a research paper titled "Machine Learning Algorithms Applied with Questionnaire Dataset to Investigate Anxiety and Depression, Evaluating the Effectiveness of Deep Learning Models in Network Intrusion Detection" at the INTERNATIONAL CONFERENCE ON RECENT INNOVATIONS IN COMPUTING (ICRIC2023) VOLUME 2, 2024 International Conference on Cybernation and Computation (CYBERCOM) (eBook ISBN: 978-981-97-7862-1, Print ISBN: 978-981-97-7861-4).

- Dr. Diwakar Yagyasen authored a book chapter titled "Predicting Resilience of Blood Groups Against COVID-19 Delta Variant Using Machine Learning" in the book "Advanced Research in Electronic Devices for Biomedical and mHealth" (ISBN: 9781003424666).

- Dr. Sangeeta Mishra published the book "Artificial Intelligence and its Influence on Modern Art"(ebook ISBN No.: 978-93-7002-429-8).

PUBLICATIONS
OF FACULTY

- Richa Verma has been granted a patent for "Self Confidence Assessment Device," showcasing innovation in psychological assessment technology.
- Mr. Amit Kumar Sachan has been granted a patent on “FINANCE FORECASTING-AI-DEVICE”.
- Dr. Sangeeta Mishra has been granted a patent on “AI-POWERED PERSONALIZED LEARNING PLATFORM”.

BBDITM

PUBLICATIONS
OF FACULTY

Original

AI Ethics: Bridging Innovation with Morality

Suroj Singh[1], Priyanka Gupta[2], Amit Kumar Sachan[3], and Sonam Singh[4]

[1, 2] Assistant Professor, Department of Computer Science & Engineering, Babu Banarasi Das Engineering College, Lucknow
[3]Assistant Professor, Department of Computer Science & Engineering, Babu Banarasi Das Institute of Technology and Management, Lucknow
[4]Assistant Professor, Department of Computer Science & Engineering, Babu Banarasi Das University, Lucknow

Abstract: With advancements in face recognition, self-driving cars, and medical diagnostics, artificial intelligence (AI) is having an increasing impact on people and society. AI has the amazing potential to significantly improve human wellbeing and advance both socially and economically. However, because to obstacles such limited viability, data biases, data security, and some privacy concerns, AI also presents significant risks. To reduce hazards, users and developers need to be aware of these drawbacks and take appropriate action. To anticipate and lessen negative effects, it is essential to identify possible areas of danger across the AI life cycle. Even though "machine ethics" research started in 2006, AI ethics is still a relatively new area of study within ethics more broadly. Establishing appropriate ethical principles, norms, standards, rules, and regulations requires an understanding of AI ethics and how to develop ethical AI. AI that is ethical acts and behaves in a morally upright way.

There are many different perspectives on AI, and in order to properly identify AI, developers, scholars, business leaders, legislators, and the general public must all contribute. This paper examines ethical difficulties and prejudices in AI, emphasizing injustice and bias as pressing problems from a sociotechnical standpoint. Uncertain standards and a lack of ethical expertise are the primary barriers in AI ethics.

Keywords: AI ethics, Bias, Data Security, Sociology, Robo ethics.

1. INTRODUCTION

AI is not a new field; rather, it is just coming out of one of its many "winters" and is starting a new "spring" [1,2]. AI's development is transforming society in ways that were unthinkable just a few years ago. Even though AI has been around for a while, its pervasiveness in our daily lives is frequently invisible. Whether it's for reading emails, conducting Google searches, recommending movies and music, or even providing driving directions, artificial intelligence has become a vital part of our lives. The COVID-19 epidemic has increased demand for AI's help and highlighted our reliance on it. AI is becoming more and more common in a number of sectors, including communications, education, healthcare, transportation, and agriculture. It is necessary to regularly interact with AI-powered applications in order to survive in the current world. [3, 4].

A viewpoint on the early machine age was offered by considering technology as a tool. However, advancements driven by AI are altering how people interact and exist in the current second age of machines. Governments, corporations, and other organisations frequently utilise AI-based algorithms to make decisions that have a big influence on people and society. Everyone, everywhere, and at any time could be impacted by their choices. They might provide answers to issues that come up in a range of occupations or in daily life, but they might also carry risks, including being turned down for a job or medical care. The discriminatory effect that AI-based decision-making has on some demographic groups has been shown by prior incidents. The company's ad engine, which has been shown to show far fewer high-paying job ads for women than for males, is one instance of gender bias in Google's targeted advertising [5]. These incidents have increased public anxiety about the potential effects of AI on our day-to-day lives.

Since it is normal for most people to be ignorant of the experiences of other groups, prejudice is not a new occurrence. Instead, it dates back to the earliest days of human civilisation [6]. However, AI-based decision-making has the potential to establish completely new categories, norms, and biases of a completely different kind, which could reinforce pre-existing biases. These ever-growing worries have prompted a reassessment of AI-based systems in favour of new approaches that also consider how equitable their judgements are.

Many academics and industry professionals believe that since AI is still far from being on par with humans, there is no urgent need to think about ethical issues. However, when paired with other intelligent technologies like robotics, AI has already shown promise in a variety of industries, including business, healthcare, and transportation. Applications such as autonomous cars bring up significant ethical issues, and AI is already having an impact on civilisation and society. Autonomous vehicles, for example, have the potential to eliminate a wide range of jobs, which would significantly impact related businesses like transportation. For instance, allowing

International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 09 Issue: 05 | May - 2025 SJIF Rating: 8.586 ISSN: 2582-3930

EduDevOps : The Ultimate CI/CD Corporate Devops Pipeline Project

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1Assistent Professor, Department of Computer Science and Engineering, Babu Banarasi Das Institute of Technology and Management, Lucknow, U.P

2Student, Department of Computer Science and Engineering, Babu Banarasi Das Institute of Technology and Management, Lucknow, U.P

3Student, Department of Computer Science and Engineering, Babu Banarasi Das Institute of Technology and Management, Lucknow, U.P

4Student, Department of Computer Science and Engineering, Babu Banarasi Das Institute of Technology and Management, Lucknow, U.P

Abstract -The accelerated pace of digital transformation has heightened the requirement for efficient, scalable, and reliable software delivery practices. Legacy software development and deployment pipelines are typically inefficient owing to manual interventions, siloed teams, and constraints in scalability.
This research presents a comprehensive DevOps Capstone Project that takes aim at conceptualizing and executing an enterprise-scale Continuous Integration and Continuous Deployment (CI/CD) pipeline. By utilizing Docker, Kubernetes, Terraform, and other automated tools, the project addresses significant software delivery concerns such as speed, quality, and operational efficiency.
The findings demonstrate how a consolidated DevOps pipeline can enable agile development, reduce time-to-market, and improve overall software quality, thereby positioning organizations for long-term digital success

Key Words: DevOps, CI/CD Pipeline, Automation, Containerization, Infrastructure as Code

1.INTRODUCTION

As companies utilize increasingly digital solutions to remain competitive, there has never been more of a need for faster and more stable software delivery. With so much speed in the environment, creating, testing, and deploying software quickly enough is the primary difference between marketplace success and failure. Yet, conventional software deployment cannot always accommodate these needs because it is afflicted with many inherent disadvantages. Manual intervention at various stages, poor coordination between dev and operations teams, and lack of scalability become key concerns in such an approach.
These issues are inclined to postpone release schedules other th an jeopardizing the system in rendering suboptimal performance while reducing the end-user satisfaction and making business results worse.
There arises DevOps as a facilitator of cultural change and technical paradigm to overcome all these challenges with automated, collaborative, and continuous improvement. The core of DevOps is the Continuous Integration and Continuous Deployment pipeline, which is the foundation that automates code integration, testing, deployment, and monitoring processes. Through removing the human bottlenecks, CI/CD pipelines enable seamless software updates, which enables organizations to take their products to market speedily and securely with less risk. This paradigm increases the rate of development without compromising on the quality and stability of software by having an agile and resilient model of software delivery.
Ultimate CI/CD Corporate DevOps Pipeline is a corporate-level pipeline with strong, scalable, and secure features that is built in accordance with the requirements of the corporate world. The pipeline takes care of recurring processes and maintains real-time feedback to provide enhanced quality in the release of software. The central parts of the project are containerization using Docker, orchestration using Kubernetes, and infrastructure management using Terraform. Together, these technologies create an extremely flexible and scalable solution with excellent operational efficiency. Further, the pipeline is created to easily integrate with well-known version control systems and Agile project management software, so the process is easy and team-friendly from coding to production deployment.
This project specifically targets some of the most critical problems faced during software deployment, such as slow feedback loops, inefficiency in resources, and high error potential due to manual interventions. The project converts conventional software delivery into a lean, flexible, and future-proof pipeline through the application of DevOps principles and advanced automation technologies. This

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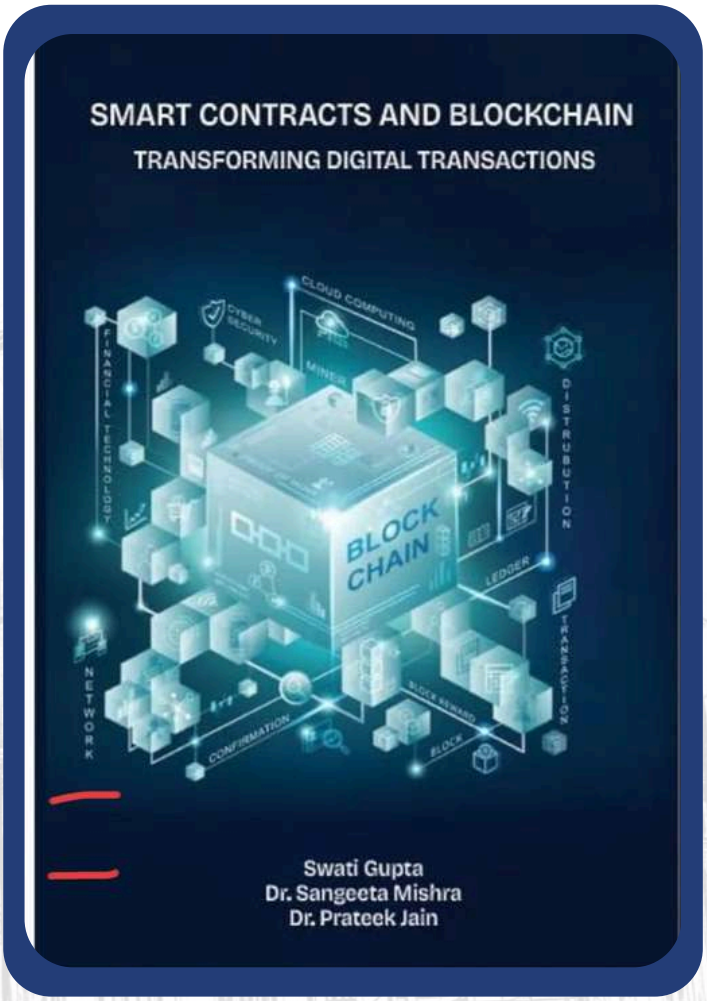

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ORIGINAL
क्रम सं/ Serial No. : 193252

INTELLECTUAL PROPERTY INDIA

पेटेंट कार्यालय, भारत सरकार | The Patent Office, Government Of India

डिजाइन के पंजीकरण का प्रमाण पत्र | Certificate of Registration of Design

डिजाइन सं. / Design No.	:	442095-001
तारीख / Date	:	26/12/2024
पारस्परिकता तारीख / Reciprocity Date*	:	
देश / Country	:	

प्रमाणित किया जाता है कि संलग्न प्रति में वर्णित डिजाइन जो *FINANCE FORECASTING AI- DEVICE* से संबंधित है, का पंजीकरण, श्रेणी 14-02 में 1.Dr. Jolly Sushma 2. Prof. Harish Chandra Sharma 3.Dr. Animesh Sunilrao Kopekar 4.Aswini Kumar Mohanty 5.Amit Kumar Sachan 6.Dr. M Shuaib Ahmed 7.Ms. Akanksha Yadav के नाम में उपर्युक्त संख्या और तारीख में कर लिया गया है।

Certified that the design of which a copy is annexed hereto has been registered as of the number and date given above in class 14-02 in respect of the application of such design to *FINANCE FORECASTING AI- DEVICE* in the name of 1.Dr. Jolly Sushma 2. Prof. Harish Chandra Sharma 3.Dr. Animesh Sunilrao Kopekar 4.Aswini Kumar Mohanty 5.Amit Kumar Sachan 6.Dr. M Shuaib Ahmed 7.Ms. Akanksha Yadav.

डिजाइन अधिनियम, 2000 तथा डिजाइन नियम, 2001 के अध्यधीन प्रावधानों के अनुसरण में।
In pursuance of and subject to the provisions of the Designs Act, 2000 and the Designs Rules, 2001.

जारी करने की तिथि / Date of Issue : 27/02/2025

महानियंत्रक पेटेंट, डिजाइन और व्यापार चिह्न
Controller General of Patents, Designs and Trade Marks

The reciprocity date (if any) which has been allowed and the name of the country. Copyright in the design will subsist for ten years from the date of Registration, and may under the terms of the Act and Rules be extended for a further period of five years. This Certificate is not for use in legal proceedings or for obtaining registration abroad.

4/19/25, 10:19 AM — Intellectual Property India

Office of the Controller General of Patents, Designs & Trade Marks
Department for Promotion of Industry and Internal Trade
Ministry of Commerce & Industry,
Government of India

(http://ipindia.nic.in/index.htm)

INTELLECTUAL PROPERTY INDIA (http://ipindia.nic.in/index.htm)

Application Details	
APPLICATION NUMBER	202511027359
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	24/03/2025
APPLICANT NAME	1 . Prof. (Dr.) SYED HAIDER ALI 2 . APARNA SINGH 3 . Dr. SANGEETA MISHRA 4 . Dr INA KAPOOR 5 . RAMAKANT KATIYAR
TITLE OF INVENTION	AI-POWERED PERSONALIZED LEARNING PLATFORM
FIELD OF INVENTION	COMPUTER SCIENCE
E-MAIL (As Per Record)	silverliningipr@gmail.com
ADDITIONAL-EMAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	--
PUBLICATION DATE (U/S 11A)	04/04/2025

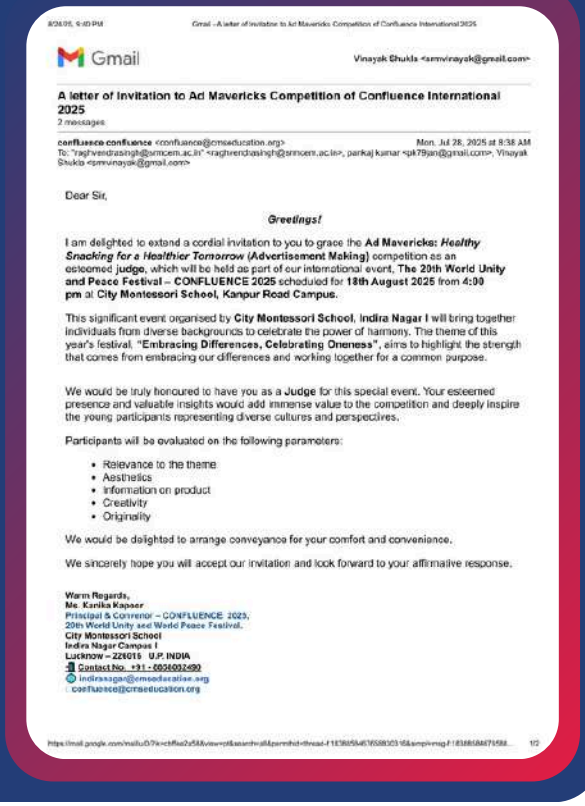
Application Status

https://iprsearch.ipindia.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus 1/2

ACHIEVEMENTS
OF FACULTY

- **Dr. Vinayak Shukla was invited as an esteemed judge to grace the *"Ad Mavericks: Healthy Snacking For a Healthier Tomorrow (Advertising Making)"* competition on 18th August, 2025 at "The 20th World Unity and Peace Festival: CONFLUENCE 2025" at City Montessori School, Kanpur Road Campus.**

LETTER OF INVITATION



Gmail - A letter of invitation to Ad Mavericks Competition of Confluence International 2025

Gmail — Vinayak Shukla <srmvinayak@gmail.com>

A letter of invitation to Ad Mavericks Competition of Confluence International 2025

2 messages

confluence confluence <confluence@cmseducation.org> Mon, Jul 28, 2025 at 8:38 AM
To: "raghvendrasingh@srmcem.ac.in" <raghvendrasingh@srmcem.ac.in>, pankaj kumar <pk79jan@gmail.com>, Vinayak Shukla <srmvinayak@gmail.com>

Dear Sir,

Greetings!

I am delighted to extend a cordial invitation to you to grace the **Ad Mavericks: *Healthy Snacking for a Healthier Tomorrow* (Advertisement Making)** competition as an esteemed **judge**, which will be held as part of our international event, **The 20th World Unity and Peace Festival – CONFLUENCE 2025** scheduled for **18th August 2025** from **4:00 pm** at **City Montessori School, Kanpur Road Campus.**

This significant event organised by **City Montessori School, Indira Nagar I** will bring together individuals from diverse backgrounds to celebrate the power of harmony. The theme of this year's festival, **"Embracing Differences, Celebrating Oneness"**, aims to highlight the strength that comes from embracing our differences and working together for a common purpose.

We would be truly honoured to have you as a **Judge** for this special event. Your esteemed presence and valuable insights would add immense value to the competition and deeply inspire the young participants representing diverse cultures and perspectives.

Participants will be evaluated on the following parameters:

- Relevance to the theme
- Aesthetics
- Information on product
- Creativity
- Originality

We would be delighted to arrange conveyance for your comfort and convenience.

We sincerely hope you will accept our invitation and look forward to your affirmative response.

Warm Regards,
Ms. Kanika Kapoor
Principal & Convenor – CONFLUENCE 2025,
20th World Unity and World Peace Festival,
City Montessori School
Indira Nagar Campus I
Lucknow – 226016 U.P. INDIA
Contact No. +91 - 6054092490
indiranaga@cmseducation.org
confluence@cmseducation.org

APPRECIATION
OF FACULTY

Some of the faculties were appreciated for their tremendous work, outstanding performance and astonishing efforts towards the students' development, overall growth and beneficiary steps for the BBDITM Institution and its well-being. Below are the names of the faculties that were appreciated by our BBDITM Institution:-

- **Dr. Kavita Dhariyal (ASH)- Chemistry**
- **Mr. Sushant Shukla (ASH)- Maths**
- **Mr. Gyanendra Kumar (CSE)**
- **Mr. Deepak Pant (CSE)**
- **Mrs. Jyoti Gaur (CSE)**
- **Mr. Ashwani Pandey (CSE)**
- **Mr. Achaman Mishra (ASH)- Engg. Mech.**

STUDENT'S IN TECHNICAL EVENTS

Some of the students outshined and bagged specific participation and position in some of the respective technical events and brought happiness and pride to BBDITM institution. The name of the students are mentioned below:-

S.N	Name Of The Student	Name Of The Event	State /National/ International Level	Date Of Event	Name Of The Award If Any
1	UJJWAL KUSHWAHA	ERAKSHA - TECH AVISHKAR	National Level	17-Dec-2024	1ST POSITION
2	Shreyansh Srivastava	Attentrack	National Level	11-Mar-2024	1st Runner-up
3	Shreyansh Srivastava	Green Pioneer Hackathon	National Level	13-Jan-2025	1st Runner-up
4	UJJWAL KUSHWAHA	GDG LUCKNOW MEME WAR	State Level	17-Nov-2024	1ST POSITION
5	Manash Mishra	Meme war	State Level	11-Nov-2024	2nd position
6	UJJWAL KUSHWAHA	AKTU ZONALS ROBO SOCCER	State Level	30-Nov-2024	3RD POSITION
7	Mantasha	AKTU ZONALS	State Level	30-Nov-2024	3RD POSITION
8	Aditya kumar sonkar	AKTU ZONALS	State Level	30-Nov-2024	3RD POSITION

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FACULTY DEVELOPMENT PROGRAMS

- **Dr. Sangeeta Mishra attended the FDP "The Digital Pulse: Exploring the core of Emerging Technologies" from July 14th – July 18th , 2025.**
  Organized by: *Department of Computer Science & Information Systems, Shri Ramswaroop Memorial University, Barabanki, Uttar Pradesh.*

- **Amit Kumar Sachan attended the FDP "Significance of Emerging Technologies and Intellectual Property Rights" from Dec 16 – Dec 20, 2024.**
  Organized by: *Mangalmay Institute of Management and Technology, Gr. Noida.*

- **Dr. Diwakar Yagyasen attended the FDP "Quantum Machine Learning: Bridging the Gap Between Quantum Computing and AI" from Jan 6th - Jan 11th , 2025.**
  Organized by: *AICTE Training and Learning (ATAL) Academy) at Raj Kumar Goel Institute of Technology.*

FACULTY DEVELOPMENT PROGRAMS

- **Mr. Deepak Pant completed the FDP on "Data Science(ML & AI)" from Jan 27th - Feb 1st , 2025.**
  Organized by: *E & ICT Academy, IIT Kanpur.*

- **Richa Verma completed the FDP "ML with Python" (12 days).**
  Organized by: *E&ICT Academy, Kanpur.*

- **Ms. Priyanka Gupta attended the one week FDP on "Data Visualization with Power BI" from Jan 7th - Jan 11th , 2025.**
  Organized by: *Electronics & Communication Engineering and Electrical Engineering, Babu Banarasi Das Northern India Institute of Technology, Lucknow in association with "Learn & Build".*

- **Dr. Sangeeta Mishra attended the 5-day FDP "Building Web Development Solutions with Cloud Computing from Jan 27th - Jan 31st , 2025.**
  Organized by: *Next Gen Employability Program.*

FACULTY DEVELOPMENT PROGRAMS

- **Ms. Padmini Mishra participated in the FDP "Building Web Development Solutions with Cloud Computing" from Nov 4th - Nov 8th , 2024.**
  Organized by: *Next Gen Employability Program (Edunet AICTE).*

- **Archana Dwivedi participated in the FDP "Applied AI: Practical Implementations" from Nov 8th - Nov 22th , 2025.**
  Organized by: *Microsoft India, SAP India & AICTE, TechSaksham.*

- **Dipti Ranjan attended the FDP "MERN Stack Web Development", organized by TechSaksham Program from Nov 25th - Nov 29th , 2024.**
  Organized by: *Microsoft Edunet AICTE.*

- **Dr. Sangeeta Mishra attended the 5-day FDP "Building Web Development Solutions with Cloud Computing from Jan 27th - Jan 31st , 2025.**
  Organized by: *Next Gen Employability Program.*

FACULTY DEVELOPMENT PROGRAMS

SHRI RAMSWAROOP MEMORIAL UNIVERSITY
(Lucknow-Deva Road, Barabanki, U.P., 225003)
Estd.2012

CERTIFICATE OF PARTICIPATION

FACULTY DEVELOPMENT PROGRAM

This is to certify that Sangeeta Mishra, Assistant Professor has participated in **Faculty Development Program** on The Digital Pulse: Exploring the core of Emerging Technologies Organized by **Department of Computer Science & Engineering, Department of Computer Science & Information Systems at Shri Ramswaroop Memorial University, Barabanki, Uttar Pradesh** from **July 14th - 18th, 2025.**

Dr. Shobhit Sinha, HOD, CSE, SRMU
Prof. (Dr.) Bineet Kumar Gupta, HOD, DCSIS, SRMU
Prof. (Dr.) Apurva Anand, Director, IoT, SRMU
Prof. (Dr.) Vikas Misra, Vice Chancellor, SRMU

Certificate No: ICT-28866/25

National Institute of Technical Teachers Training and Research
Chandigarh

MINISTRY OF EDUCATION, GOVERNMENT OF INDIA

Certificate

This is to certify that

SANGEETA MISHRA

BBDEC, LUCKNOW
UTTAR PRADESH

Participated in the AICTE Recognized Faculty Development Programme

on

Mastering Cloud Computing Essentials with AWS

Conducted by

Computer Science and Engineering Department

from

03/03/2025 to 07/03/2025 (One Week)

at

Integral University, Lucknow, UP

Coordinator
Director

FACULTY DEVELOPMENT PROGRAMS

AMITY UNIVERSITY
CHHATTISGARH

CERTIFICATE

OF PARTICIPATION

This certificate is presented to

Dr. Sangeeta Mishra

of

BBD University, Lucknow

He/She has participated and successfully completed the "Five-Day Online Faculty Development Program" on "**Artificial Intelligence for Sustainable Development and Quality Education: Interdisciplinary Insights from Science, Society, and Technology**" held virtually during July 21 - 25, 2025, organized by Amity School of Engineering and Technology and Amity Institute of Information Technology of Amity University Chhattisgarh, Raipur.

MR. KRANTI KUMAR DEWANGAN
HOD OF CSE/IT
AMITY UNIVERSITY CHHATTISGARH

PROF. DR. VINAY KUMAR SINGH
DEPUTY DIRECTOR, ASET & AIIT
AMITY UNIVERSITY CHHATTISGARH

PROF. DR. PIYUSH KANT PANDEY
VICE CHANCELLOR,
AMITY UNIVERSITY CHHATTISGARH

MeitY

E & ICT Academy, IIT Kanpur

(A Joint initiative of MeitY & IIT Kanpur)

Certificate

This is to certify that
Dr. / Mr. / Ms. **Deepak Pant** of
Babu Banarasi Das Institute of Technology and Management
has completed the **Faculty Development Program** on
Data Science (ML&AI)
from 27-01-2025 to 01-02-2025

Date of Issue: 18-02-2025

Prof B. V. Phani
Chief Investigator, E&ICT Academy, IIT Kanpur

FACULTY DEVELOPMENT PROGRAMS

E & ICT Academy, IIT Kanpur
(A Joint initiative of MeitY & IIT Kanpur)

Certificate

This is to certify that
Dr. / Mr. / Ms. **Deepak Pant** of
Babu Banarasi Das Institute of Technology and Management
has completed the **Faculty Development Program** on
Data Analytics Using AI
from 03-02-2025 to 08-02-2025

Date of Issue: 10-03-2025

Prof. B. V. Phani
Chief Investigator, E&ICT Academy, IIT Kanpur

CERTIFICATE
OF PARTICIPATION

This Certificate is proudly presented to

Priyanka Gupta

Babu Banarasi Das Engineering College, Lucknow

has successfully attended One Week Faculty Development Programme(FDP) on the topic **"Data Visualization with Power BI"** organized by Electronics & Communication Engineering and Electrical Engineering, Babu Banarasi Das Northern India Institute of Technology, Lucknow in association with **Learn and Build** from **7th January 2024 to 11th January 2024.**

Saurabh Bhardwaj
Founder | CEO

CERTIFICATE
OF COMPLETION

Sangeeta Mishra

has successfully completed the 5-day Faculty Development Program on
Building Web Development Solutions with Cloud Computing
under the **Next Gen Employability Program**
from **27-01-2025** to **31-01-2025**.

Dr. Sunil Luthra
Director, Training and Learning Bureau
AICTE

NG25_39398

Nagesh Singh
Chairman
Edunet Foundation

PUBLICATIONS
OF STUDENTS

- **Shikhar Kanaujia, Shivaditya Singh, Yashwant Kumar Sharma, Khushi Srivastava: A Machine Learning-Based Deanonymization Tool for Analyzing Anonymized Network Traffic, published in International Journal of Scientific Research in Engineering and Management(IJSREM), ISSN No.: 2582-3930.**

- **Saksham Gupta, Shiv Prakash Singh, Jyoti Singh, Ravi Yadav: Research based on "AI powered City Safety", published in International Research Journal of Modernization in Engineering, Technology and Science (IRJMETS), ISSN No.: 2582-5208.**

- **Dhruv Saxena, Syed Gufran Hussain, Kunal Singh, Chitransh Anand Srivastava: Machine Learning Model on “Estimating Redshirt from Galaxy Color Indices: Ridge Regression to Deep Neural Networks”, published in International Journal of Scientific Research and Engineering Development(IJSRED), ISSN No.: 2581-7175.**

PUBLICATIONS
OF STUDENTS

- **Dhruv Saxena: Research based on "Regularization-Driven Generalization in Few-Shot Learning: PAC Bayes Bound as Explanatory Tool".**

- **Monika Yadav, Dolly Mauraya, Risha Ritika, Deepanshi Nigam: Research on Sustain Track- Interactive and Accessible Carbon Footprint Analyzer, published in International Journal of Scientific Research and Engineering Development(IJSRED), ISSN No.: 2581-7175.**

- **Arun Sahani, Saumya Srivastava: Modernize the traditional examination system using "EduTest Portal using Java with Spring Boot", published in STM Journals, ISSN No.: 2455-1821.**

- **Shikhar Kanaujia, Shivaditya Singh, Yashwant Kumar Sharma, Khushi Srivastava: A Machine Learning-Based Deanonymization Tool for Analyzing Anonymized Network Traffic, published in International Journal of Scientific Research in Engineering and Management(IJSREM), ISSN No.: 2582-3930.**

PUBLICATIONS
OF STUDENTS

- **Gargi Porwal – Credit Risk Model: Research on Credit Risk Categorization Model using XGBoost, published in International Journal of Scientific Research in Engineering and Management (IJSREM), ISSN: 2582-3930, Volume 09, Issue 03, March 2025**

- **Puneet Singh – Credit Risk Model: Research on Credit Risk Categorization Model using XGBoost, published in International Journal of Scientific Research in Engineering and Management (IJSREM), ISSN: 2582-3930.**

- **Aniruddh Mishra – BioStamp: An IoT-Enabled Automated Physical Stamping System, ISSN: 8**

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PUBLICATIONS
OF STUDENTS

International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 09 Issue: 05 | May - 2025 SJIF Rating: 8.586 ISSN: 2582-3930

A Machine Learning-Based Deanonymization Tool for Analyzing Anonymized Network Traffic

Amit Kumar Sachan[1], Shikhar Kanaujia[2], Yashwant Kumar Sharma[3]
Khushi Srivastava[4], Shivaditya Singh[5]
[1]Assistant Professor, Computer Science and Engineering, Babu Banarasi Das Institute of Technology and Management, Lucknow, Uttar Pradesh, India
[2,3,4,5] Student, Computer Science and Engineering (AI&ML), Babu Banarasi Das Institute of Technology and Management, Lucknow, Uttar Pradesh, India
Email – shikhar.kanaujia786@gmail.com

Abstract
Deanonymization tools are designed to unmask hidden identities or reconstruct obscured information, often leveraging advanced data analysis techniques. These tools have applications across cybersecurity, digital forensics, and law enforcement. The goal of this study is to develop a deanonymization tool that leverages metadata analysis, pattern recognition, and machine learning algorithms to identify and correlate digital footprints left across diverse platforms. This tool targets scenarios involving anonymized communication, obfuscated data logs, and masked web interactions, aiming to reveal underlying identities without compromising ethical boundaries. This project explores the concept of deanonymization, a technique used to reveal the true identity of individuals or entities previously anonymized in data systems. In a college context, this topic is relevant due to the growing use of online systems for academic assessments, student interactions, and personal data storage. The project investigates the methods, tools, and challenges associated with deanonymization, particularly in relation to how data, once anonymized, can potentially be traced back to its source through advanced algorithms, metadata analysis, or pattern recognition. Our proposed tool employs multi-layered analysis, starting with metadata extraction from network packets, social media footprints, or anonymized datasets. By
correlating temporal, spatial, and contextual parameters, the system constructs potential user profiles. Next, machine learning models analyze behavioral patterns, leveraging clustering and classification algorithms to match anonymized entities with known datasets. The system also integrates Natural Language Processing (NLP) techniques for deanonymizing text-based communications, extracting linguistic traits that can link anonymous entities to real-world users. Ethical considerations and regulatory compliance are central to this project, ensuring the tool is used responsibly. Stringent safeguards are incorporated to prevent misuse, and its deployment is intended for authorized personnel in scenarios such as criminal investigations, fraud detection, and cyber threat mitigation. This deanonymization tool represents a significant step in advancing cybersecurity capabilities while emphasizing the balance between security needs and ethical considerations in the digital age.

1. Introduction
Cybersecurity in the dark web domain focuses on safeguarding users and systems operating in this concealed network. The dark web thrives on anonymity, offering privacy to users ranging from whistleblowers to cybercriminals. However, de-anonymity—the process of exposing hidden identities—poses a critical challenge. By exploiting vulnerabilities in networks, analyzing behavior, or correlating traffic, entities can trace users' real-world identities. This dual-edged capability aids law enforcement in combating illegal activities but raises ethical concerns for legitimate privacy focused users. Understanding de-anonymity is pivotal for balancing security and privacy in the ever-evolving dark web landscape.
The TOR (The Onion Router) network was designed to provide anonymity and privacy for users by routing traffic through a series of encrypted relays. This network is widely used for accessing "onion sites," which exist exclusively within the TOR ecosystem and are inaccessible via traditional search engines. These sites often serve as platforms for privacy-focused communications and activities. However, the promise of complete anonymity within TOR is not absolute. With advancements in technology and the evolving capabilities of adversaries, the de-anonymization of entities—whether individuals, organizations, or services—has become a critical topic in cybersecurity. De-

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AI Powered City Safety

Saksham Gupta[*1], Shiv Prakash Singh[*2], Jyoti Gaur[*3], Shobhit Singh[*4], Ravi Yadav[*5]
[*1,2,3,4]Students (Computer Science and Engineering), Babu Banarasi Das Institute of Technology & Management, Lucknow, Uttar Pradesh, India.

[*5]Assistant Professor, Department of Computer Science Engineering, Babu Banarasi Das Institute of Technology, Lucknow, Uttar Pradesh, INDIA

ABSTRACT
The AI-Powered City Safety project leverages advanced technologies like Artificial Intelligence (AI), Machine Learning (ML), and Internet of Things (IoT) to address critical urban safety challenges. With rapid urbanization and increased population density, the project aims to develop predictive, preventive, and risk-reduction solutions for hazards such as fires and road accidents. By integrating state-of-the-art object detection models like YOLOv5 and YOLOv8 with OpenCV for real-time video analysis, the system achieves high accuracy in detecting and responding to potential threats. Key intervention areas include early fire detection, where YOLOv8 and OpenCV's preprocessing techniques ensure rapid identification of fire and smoke, and dynamic road accident prevention, where YOLOv5 and OpenCV track vehicle and pedestrian interactions to predict collisions. A user-friendly interface enables real-time alerts, incident visualization, and system control for emergency responders and urban authorities.
The proposed methodology focuses on scalable and adaptable system development, including environment setup, data preprocessing, model training, deployment, and continuous improvement through feedback and re-training. Results demonstrate high precision, recall, and low latency, validating the system's efficacy in urban safety management. This project provides a replicable framework for smart cities worldwide, contributing to safer, more sustainable urban environments.

I. INTRODUCTION
The AI-POWERED CITY SAFETY concept is an advanced approach that aims to improve the safety and resilience of towns and cities through the use of **Artificial Intelligence (AI)** and **Machine Learning (ML).** Safety in urban spaces is one of the major concerns and challenges of the present age due to the alarming versions of risk and danger that accompanies rapid urbanization and increased population concentrations. This project aims at offering universal solutions to these problems that are going to require the application of high technology in an effort to ensure that urban spaces become secure, sustainable, and habitable for all inhabitants. The project would develop and apply predictive, preventive, and risk-reduction models for any possible hazard in urban areas, using a number of AI and ML technologies backed by the powerful OpenCV, which is a free library for computer vision. With OpenCV, one will have all the tools available for image and video analysis, real-time object detection, motion tracking, and activity recognition. That is exactly what this project requires to make preprocessing and analysing the large quantities of visual data effective.

Fire Detection: Installation of early fire detection systems that employ the latest machine vision technologies, such as YOLOv8, in combination with OpenCV's preprocessing techniques to quickly evaluate fire risks. OpenCV supports critical operations such as contour detection, edge detection, and noise filtering to ensure accurate detection even in

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PUBLICATIONS
OF STUDENTS

International Journal of Scientific Research and Engineering Development-- Volume 8 Issue 3, May-June 2025
Available at www.ijsred.com

RESEARCH ARTICLE OPEN ACCESS

Estimating Redshift from Galaxy Color Indices: Ridge Regression to Deep Neural Networks

Dhruv Saxena*, Syed Gufran hussain**, Kunal Singh***, Chitransh Anand Srivastava****

*(Student, Department of Computer Science, BBDITM, Lucknow, India
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** (Student, Department of Computer Science, BBDITM, Lucknow, India
Email: Tazocmd@gmail.com)
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Email: kundu1972@gmail.com)
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Email: chitransh.srivastava3412@gmail.com)

Abstract:

This paper explores the use of machine learning models for estimating galaxy redshift from photometric color features derived from Sloan Digital Sky Survey (SDSS) data. We implemented and compared three models: a simple Ridge Regression, a shallow neural network using basic color indices, and a deeper neural network with an expanded set of color combinations. While the Ridge model captured some linear trends, both neural networks performed noticeably better, with the deeper model achieving slightly higher accuracy. Although the models are relatively simple and trained on basic color inputs, the results suggest that redshift prediction using photometric data is feasible without complex preprocessing or massive datasets.

Keywords — redshift estimation, galaxy colors, SDSS, ridge regression, neural network, photometric features, machine learning, regression models.

I. INTRODUCTION

In cosmology, redshift is an important value that helps us understand how far away galaxies are and how the universe is expanding. Usually, redshift is measured using spectroscopy, which gives accurate results but takes a lot of time and effort. Since large sky surveys like the Sloan Digital Sky Survey (SDSS) collect huge amounts of photometric data (like galaxy brightness in different filters), it makes sense to explore whether we can predict redshift using just that.

We started with a basic question: **Can we use simple color differences between SDSS magnitudes to estimate redshift using machine learning?** This led us to try out a few models, starting from a standard Ridge Regression, moving on to a basic neural network, and finally building a deeper network with more color features. The goal wasn't to create a state-of-the-art system, but to see how much we could get out of these models using just the available color data.

This paper documents that process and compares how each of the three models performed on the task. The work is meant to be a straightforward exploration using standard tools, with an emphasis on simplicity and quick experimentation.

In astronomy, **redshift** is a key concept used to determine how far away a galaxy or celestial object is, and how fast it is moving away from us. The

RESEARCH ARTICLE OPEN ACCESS

Regularization-Driven Generalization in Few-Shot Learning: PAC-Bayes Bound as an Explanatory Tool

Dhruv Saxena
(Student, Department of Computer Science, BBDITM, Lucknow, India
Email: dhruv11111sa@gmail.com)

Abstract:

In this paper, I explore how regularization techniques like dropout and weight decay impact generalization in few-shot learning tasks. To study this, I designed and ran experiments across multiple regression-based few-shot tasks, measuring the generalization gap — the difference between training and test loss. Alongside the empirical results, I computed PAC-Bayesian bounds to gain a theoretical understanding of generalization behavior. The results show that models with regularization not only generalize better but also produce tighter PAC-Bayes bounds, indicating stronger theoretical guarantees. I also conducted an ablation study by removing regularization, which led to higher generalization gaps and looser bounds. This research shows how combining empirical experiments with PAC-Bayesian theory can provide meaningful insights into why certain models generalize better, especially in few-shot learning scenarios.

Keywords —Few-Shot Learning, Generalization Gap, PAC-Bayesian Theory, Regularization, Dropout, Weight Decay, Meta-Learning, KL Divergence, Empirical Risk, Theoretical Bound

I. INTRODUCTION

Generalization — the ability of a model to perform well on unseen data — is one of the most important goals in machine learning. This becomes even more challenging in few-shot learning, where models must learn from very limited training data. In such settings, overfitting becomes a common issue, and understanding the factors that help models generalize is crucial. While deep learning methods can adapt to complex patterns, their generalization abilities often rely on strategies like regularization and proper initialization.

In this research, I aim to explore the connection between regularization techniques and generalization performance in the context of few-shot learning. Specifically, I study how applying **dropout** and **weight decay** affects both the empirical generalization gap and the **PAC-Bayesian generalization bound**, a theoretical measure grounded in probability theory. The PAC-Bayes framework offers a principled way to connect training loss, model complexity (measured via KL divergence), and confidence about generalization. This makes it a valuable tool for analyzing not just how well a model performs, but why it performs that way.

To conduct this study, I use a simple meta-learning setup where models are trained on synthetic few-shot regression tasks. I compare models trained with and without regularization, track their training and test losses, and compute the generalization gap. Alongside this, I calculate the PAC-Bayesian bound for each model to provide a theoretical perspective on its generalization ability. I also perform an **ablation study** by removing regularization to observe its impact, and visualize loss curves across epochs to show training stability.

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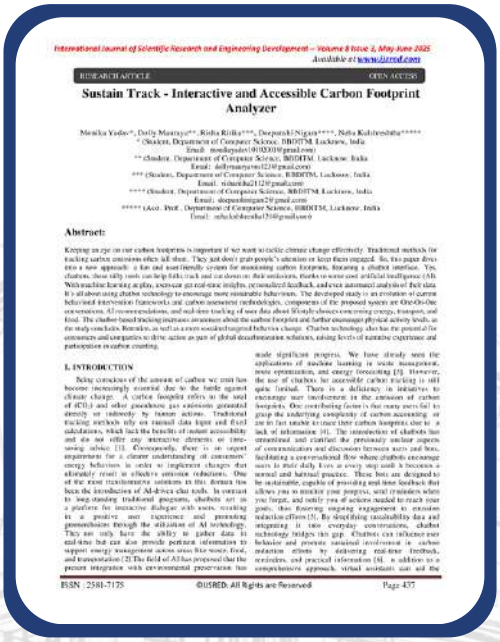
PUBLICATIONS
OF STUDENTS



International Journal of Scientific Research and Engineering Development – Volume 8 Issue 3, May-June 2025
Available at www.ijsred.com

RESEARCH ARTICLE OPEN ACCESS

Sustain Track - Interactive and Accessible Carbon Footprint Analyzer

Monika Yadav*, Dolly Maurya**, Ridhi Rikka***, Deepanshi Nigam****, Neha Kulshreshtha*****
* (Student, Department of Computer Science, BBDITM, Lucknow, India
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Email: deepanshinigam29@gmail.com)
***** (Asst. Prof., Department Of Computer Science, BBDITM, Lucknow, India
Email: nehakulshreshtha1210@gmail.com)

Abstract:

Keeping an eye on our carbon footprints is important if we want to tackle climate change effectively. Traditional methods for tracking carbon emissions often fall short. They just don't grab people's attention or keep them engaged. So, this paper dives into a new approach: a fun and user-friendly system for monitoring carbon footprints, featuring a chatbot interface. Yes, chatbots, those nifty tools can help folks track and cut down on their emissions, thanks to some cool artificial intelligence (AI). With machine learning at play, it processes get real-time insights, personalized feedback, and even automated analysis of their data. It's all about using chatbot technology to encourage more sustainable behaviours. The developed study is an evolution of current behavioural intervention frameworks and carbon assessment methodologies, components of the proposed system are One-On-One conversations, AI recommendations, and real-time tracking of user data about lifestyle choices concerning energy, transport, and food. The chatbot-based tracking instances awareness about the carbon Footprint and further encourages physical activity levels, as the study concludes. Besides, as well as a more socialized targeted behavior change. Chatbot technology also has the potential for consumers and companies to drive action as part of global decarbonization solutions, raising levels of narrative experience and participation in carbon counting.

I. INTRODUCTION

Being conscious of the amount of carbon we emit has become increasingly essential due to the battle against climate change. A carbon footprint refers to the total of CO_2 and other greenhouse gas emissions generated directly or indirectly by human actions. Traditional tracking methods rely on manual data inputs and fixed calculations, which lack the benefits of instant accessibility and do not offer any interactive elements or time-saving advice [1]. Consequently, there is an urgent requirement for a clearer understanding of consumers' energy behaviours in order to implement changes that ultimately result in effective emission reductions. One of the most transformative solutions in this domain has been the introduction of AI-driven chat tools. In contrast to long-standing traditional programs, chatbots act as a platform for interactive dialogue with users, resulting in a positive user experience and promoting pronounced changes through the utilization of AI technology. They not only have the ability to gather data in real-time but can also provide pertinent information to support energy management actions such as water, food, and transportation [2]. The field of AI has progressed that the present integration with environmental preservation has made significant progress. We have already seen the applications of machine learning in waste management, route optimization, and energy forecasting [3]. However, the use of chatbots for accessible carbon tracking is still quite limited. There is a deficiency in initiatives to encourage user involvement in the emission of carbon footprints. One contributing factor is that many users fail to grasp the underlying complexity of carbon accounting or are in fact unable to trace their carbon footprints due to a lack of information [4]. The introduction of chatbots has streamlined and clarified the previously unclear aspects of communications and discussion between users and bots, facilitating a conversational flow where chatbots encourage users in their daily lives at every step until it becomes a normal and habitual practice. These bots are designed to be sustainable, capable of providing real-time feedback that allows you to monitor your progress, send reminders when you forget, and notify you of actions needed to reach your goals, thus fostering ongoing engagement to maintain reduction efforts [5]. By identifying sustainability data and integrating it into everyday conversations, chatbot technology bridges this gap. Chatbots can influence user behavior and promote sustained involvement in carbon reduction efforts by delivering real-time feedback, reminders, and practical information [6]. In addition to a comprehensive approach, virtual assistants such as the

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Recent Trends in Programming Languages
Volume 8, Issue 2, 2025
Review Article
https://journals.stmjournals.com/rtpl

EduTest Portal Using Java with Spring Boot

Arun Sahni[1*], Saumya Srivastava[2], Archana Dwivedi[3]

Abstract

The "EduTest Portal" is an innovative and comprehensive web-based platform developed to transform and modernize the traditional examination system. It utilizes modern technologies to provide a secure, efficient, and highly user-friendly environment for conducting online assessments. This platform is designed to overcome the common drawbacks of manual exam procedures, such as excessive paperwork, time consumption, human error in grading, and the high cost of administration. EduTest Portal offers a streamlined and automated process that benefits both educators and students by improving accuracy, transparency, and accessibility. Educational institutions can significantly reduce their administrative burden while also gaining access to useful performance analytics and real-time data for informed academic decision-making. The portal supports various question formats, user authentication, and timed assessments to maintain examination integrity. By promoting inclusivity and flexibility, it accommodates diverse learning needs and schedules. Overall, this project showcases the ability of EduTest Portal to revolutionize the assessment process and contribute meaningfully to the advancement of digital education.

Keywords: Digital Examination system, JAVA, MYSQL, Spring Boot, Database, REST API, Email Integration

INTRODUCTION

Traditional examination systems need professors to manually examine answer sheets, which is time-consuming and mistakes. The EduTest Portal System addresses these challenges by providing an efficient, web-based exam administration solution. This approach allows students to take exams online in a simple and quick manner, with results available soon after the exam is done. The system ensures that students can log in with a valid user ID and password and complete the exam within a set time frame. The EduTest Portal System automates several components of the test process, saving time and effort on human grading. It also gives greater security and transparency than older approaches. Students can examine their results and certificates immediately after submitting their answers. This project intends to improve examination processes for educational institutions such as schools, colleges, and universities. The platform is user-friendly for both students and professors, resulting in an efficient and secure testing process. The system is meant to be accessible from any place, which makes it a great alternative to modern schooling. There are several pages of questions in the EduTest Portal System, and students must either type their responses or choose the right answers by making the right selection. The primary goal of the EduTest Portal System's design was to cut down on the amount of time needed to administer student exams by hand. The goal of developing an EduTest Portal is to solve the problems with the current exam system and transform it. The system seeks to give students an effective, affordable, and easily accessible platform.

Additionally, the system seeks to offer flexibility in Exam scheduling, immediate student feedback, and effective administrator grading.

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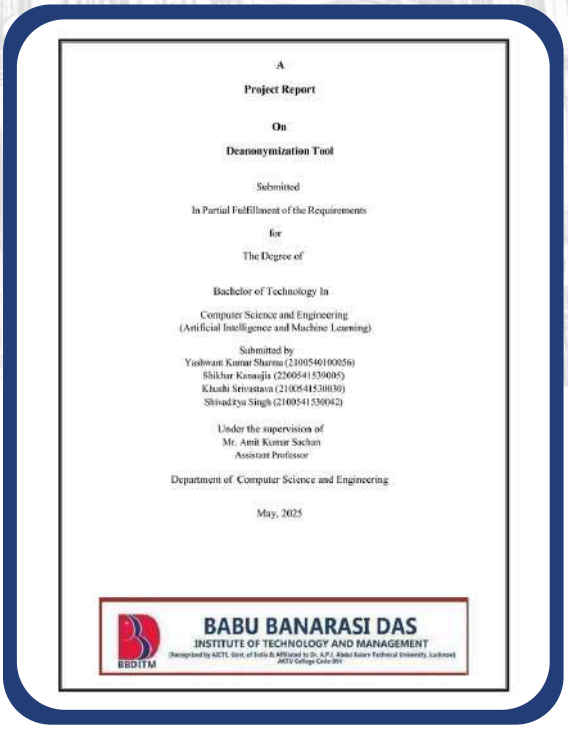

A

Project Report

On

Deanonymization Tool

Submitted

In Partial Fulfillment of the Requirements

for

The Degree of

Bachelor of Technology In

Computer Science and Engineering
(Artificial Intelligence and Machine Learning)

Submitted by
Yashwant Kumar Sharma (2100540100056)
Shikhar Kanaujia (2200541530005)
Khushi Srivastava (2100541530030)
Shivaditya Singh (2100541530042)

Under the supervision of
Mr. Amit Kumar Sachan
Assistant Professor

Department of Computer Science and Engineering

May, 2025

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NPTEL
2024 - 25

- **Deepanshi Nigam completed the 8 week course(July-Sep 2023) based on "DataBase Management System" with a consolidated score of 53%, organised by Indian Institute of Technology, Kharagpur.**

NPTEL Online Certification

(Funded by the MoE, Govt. of India)

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for successfully completing the course

Data Base Management System

with a consolidated score of 53 %

Online Assignments	22.71/25	Proctored Exam	30/75

Total number of candidates certified in this course: 6795

Jul-Sep 2023

(8 week course)

Prof. Haimanti Banerji
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL23CS79S35810412 To verify the certificate No. of credits recommended: 2 or 3

INTERNSHIPS
2024 - 25

- **Shivaditya Singh successfully completed the 80-hour training program on "Mern Stack & DSA" from 18th July 2024 to 30th August 2024 conducted by ShapeMySkills by Ducat,Noida in association with Babu Banarasi Das Institute of Technology and Management.**

ShapeMySkills
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Certificate of Training

This is to certify that

SHIVADITYA SINGH

has successfully completed 80 hour training program on

Mern Stack & DSA

from 18th July 2024 to 30th August 2024

conducted by **ShapeMySkills by Ducat, Noida**

in association with **Babu Banarasi Das Institute of Technology & Management**

Mr. Sushant Kumar Shaoo
Program Manager

INTERNSHIPS
2024 - 25

- **Sapna Kumari completed an internship as a MERN Stack Developer at ShapeMySkill, where she worked on building web applications using MongoDB, Express.js, React.js, and Node.js.**

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(An ISO 9001:2015 Certified Company)

Certificate of Training

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SAPNA KUMARI

has successfully completed 80 hour training program on

Mern Stack & DSA

from 18th July 2024 to 30th August 2024

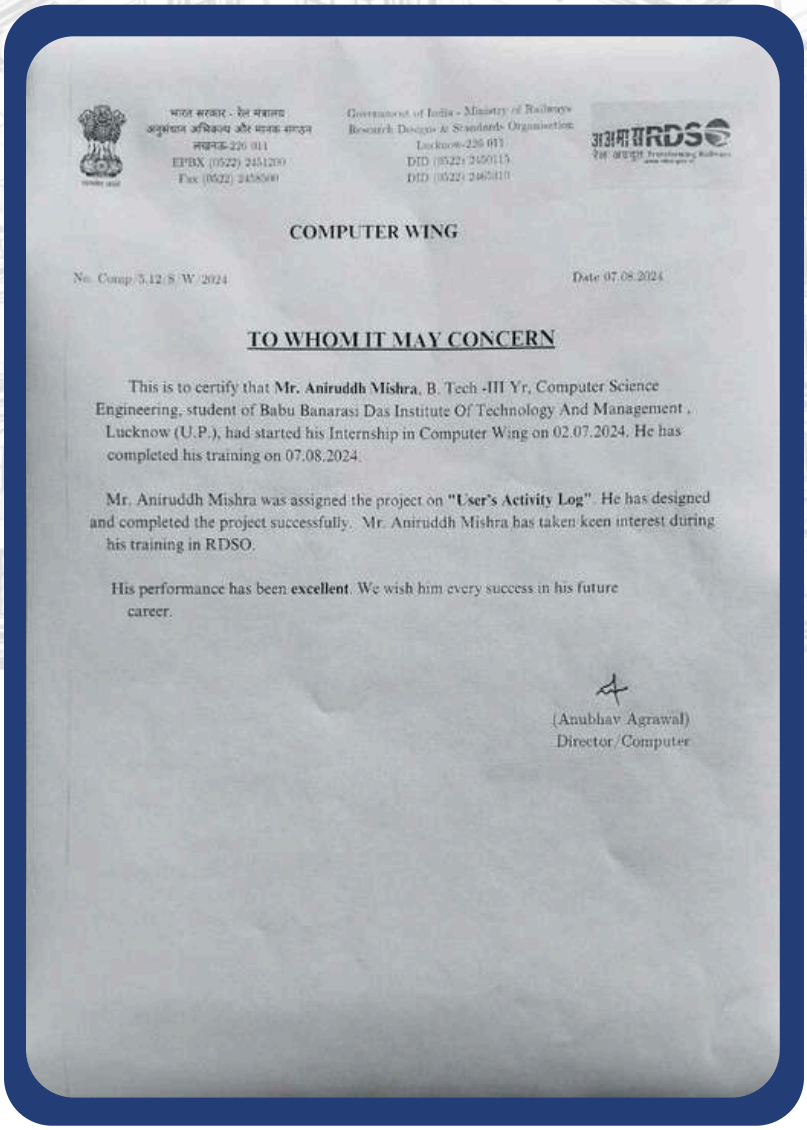
conducted by **ShapeMySkills by Ducat, Noida**

in association with **Babu Banarasi Das Institute of Technology & Management**

Mr. Sushant Kumar Shaoo
Program Manager

INTERNSHIPS
2024 - 25

- **Aniruddh Mishra worked as a Software Developer Engineer Intern at Research Design and Standard Organisation (RDSO), where he contributed to software development and optimization tasks.**



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DID (0522) 2465810

RDSO

COMPUTER WING

No. Comp/5.12/S/W/2024 Date 07.08.2024

TO WHOM IT MAY CONCERN

This is to certify that **Mr. Aniruddh Mishra**, B. Tech -III Yr, Computer Science Engineering, student of Babu Banarasi Das Institute Of Technology And Management , Lucknow (U.P.), had started his Internship in Computer Wing on 02.07.2024. He has completed his training on 07.08.2024.

Mr. Aniruddh Mishra was assigned the project on **"User's Activity Log"**. He has designed and completed the project successfully. Mr. Aniruddh Mishra has taken keen interest during his training in RDSO.

His performance has been **excellent**. We wish him every success in his future career.

(Anubhav Agrawal)
Director /Computer

SPORTS & CULTURAL FEST
2024 - 25

- Ms. Anushka Srivastava got 1st position in Blueprint under Technical event during Utkarsh'25, organized by BBD Educational Group, Lucknow from 23rd to 25th February, 2025.

- Ms. Anushka Srivastava got 3rd position in Hindi Debate under Literary category during Utkarsh'25, organized by BBD Educational Group, Lucknow from 23rd to 25th February, 2025.

- Mr. Arun Sahani of BBDITM completed the 6-months Full Stack Course on "Java with Springboat Framework" from May,2024-Oct,2024 with "A+" Grade from SoftPro India Computer Technologies Pvt. Ltd.

- Mr. Arun Sahani was proudly awarded as a key presenter in Sustainable AI 2025: International Conference on AI for a Greener Planet for his phenomenal and worthy presentation on topic "EduTest Portal using Java with Spring Boot" from 21st to 23rd February,2025, by Nano Science and Technology Consortium.

SPORTS & CULTURAL FEST
2024 - 25

- Pratibha Pal secured 3rd position in Story Writing Competition under the event "Say No to Plastic" organized by Social Club in association with Humanities Department on April 29,2025.

- Mr. Manash Mishra got recognition under his Literary event during Utkarsh'25 Annual Fest organized by BBD Educational Group, Lucknow from 23rd to 25th February, 2025.

- Mr. Manash Mishra participated under "Ek Prithvi, Ek Swasth ke liye Yog" under International Yoga Day(21st June 2025). His participation was highly awarded.

- Mr. Manash Mishra got 3rd position in Think Tank under Technical event during Utkarsh'25 Annual Fest organized by BBD Educational Group, Lucknow from 23rd to 25th February, 2025.

- Mr. Dhruv Saxena achieved 2nd position in Fine Arts event under Gesture Frame Category held as part of Utkarsh'25 Annual Fest, organized by BBD Educational Group, Lucknow from 23rd to 25th February,2025.

BBDITM

SPORTS & CULTURAL FEST
2024 - 25

- Mr. Dhruv Saxena achieved 1st position in Tech Mania event under Technical Category held as part of Utkarsh'25 Annual Fest, organized by BBD Educational Group, Lucknow from 23rd to 25th February,2025.

- Mr. Shikhar of BBDITM participated in Kho-Kho(Boys) event and secured 1st position at Dr. Abdul Kalam Technical University Sports Fest,2024-25(Zonal Level) held on 24th-25th October 2024.

- Mr. Shubham Kumar Dubey has participated in the event "Software Exhibition" held on 6th December,2024 at CA Block,SOCA,BBD University, Lucknow.

- Mr. Shubham Kumar Dubey got recognition for his participation in Tech-Expo under Technical event during Utkarsh'25 Annual Fest, organized by BBD Educational Group, Lucknow from 23rd-25th February,2025.

SPORTS & CULTURAL FEST
2024 - 25

- **Mr. Shubham Kumar Dubey achieved 3rd position in Robo Sumo Challenge event at Dr. Abdul Kalam Inter-Technical University Literary, Management and Technical Fest,2024-25(Zonal Level) held on 29th-30th November,2024.**

- **Mr. Shubham Kumar Dubey got recognition for his participation in Robo Building Workshop organized on 18th-19th November,2024 by the Robotics Club of BBDITM and in collaboration with IEEE BBDITM STB.**

- **Mr. Swapnil Shukla was certified for his great performance in the Cricket tournament organized by Govt. J.K. Cancer Institute, Kanpur, U.P. on the occasion of World Cancer Day on 4th February,2025.**

- **Mr. Swapnil Shukla was certified for his great performance in the Inter-District Cricket Tournament by the Yuva Shakti Foundation on the occasion of Ram Navami on the date of 6th April,2025.**

SPORTS & CULTURAL FEST
2024 - 25

- Mr. Pushkar Srivastava of B.B.D. secured "Winner" position in Kho-Kho in "Disha'25 (Annual Fest)" from April22-April26,2025.

- Mr. Chitransh Anand Srivastava was awarded the winner for Best Reel Coverage Contest organized by Shri Ramswaroop Memorial University, Barabanki, U.P.

- Ujjwal Kushwaha, Manash Mishra and Shikhar Srivastava of team Squad 404(Group 4) has been officially shortlisted to represent Babu Banarasi Das Institute of Technology and Management(BBDITM) for Infosys Makeathon 6.0. There use case is "Smart Spaces Intelligent Energy Management System".

SPORTS & CULTURAL FEST
2024 – 25

BBD

UTKARSH FUTURE TECH

Certificate of Merit

Awarded to Mr./Ms. Anushka Srivastava a

student of BBDITM Lucknow for achieving

I st position in Blueprint event under Technical

category which was an Individual/Team event, held as a part of Utkarsh'25 annual fest,

organized by BBD Educational Group, Lucknow from 23rd to 25th February 2025 2025.

Convener | Chief Convener | Chief Executive Director

SPi

SOFTPRO INDIA
COMPUTER TECHNOLOGIES PVT. LTD.

Certificate

This is to certify that Mr./Ms./Mrs. Arun Sahani

of B.Tech From Babu Banarasi Das Institute of Technology & Mgmt.

has accomplished the Full Stack Course on "Java with Springboot Framework"

Duration 06 Months From May'2024 To Oct'2024 With "A+" Grade.

Chief Executive Officer | Director

BBD

UTKARSH FUTURE TECH

Certificate of Merit

Awarded to Mr./Ms. ANUSHKA SRIVASTAVA a

student of BBDITM for achieving

III position in HINDI DEBATE event under LITERARY

category which was an Individual/Team event, held as a part of Utkarsh'25 annual fest,

organized by BBD Educational Group, Lucknow from 23rd to 25th February 2025 2025.

Convener | Chief Convener | Chief Executive Director

NSTC

CERTIFICATE
OF APPRECIATION

THIS CERTIFICATE IS PROUDLY AWARDED TO

As a Key Presenter in Sustainable AI 2025:
International Conference on AI for a Greener Planet

Arun Sahani

For His Phenomenal and Worthy Presentation on Topic

EduTest Portal Using Java with Spring Boot

21st to 23rd February 2025
conducted by
Nano Science and Technology Consortium

Akshay Kumar
Program Manager,
Nano Science and Technology Consortium

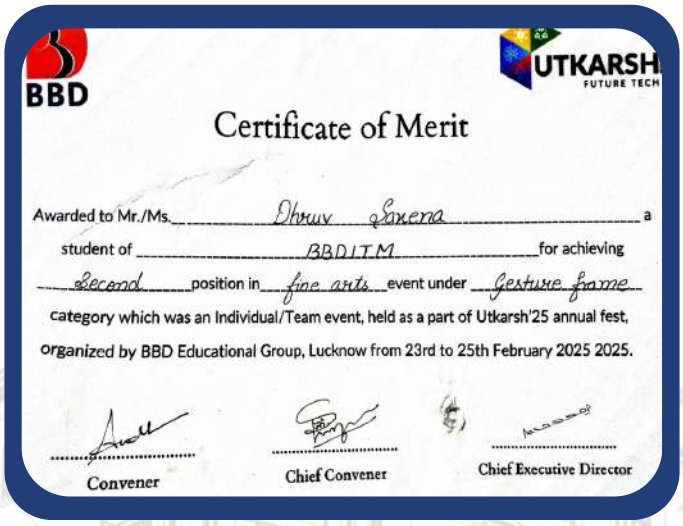
04-03-2025
Date

Puneet Mehrotra
Director,
Consortium e-Learning Network Pvt. Ltd.

BBDITM

SPORTS & CULTURAL FEST
2024 – 25

SPORTS & CULTURAL FEST
2024 – 25



BBD

UTKARSH FUTURE TECH

Certificate of Merit

Awarded to Mr./Ms. Dhruv Saxena a

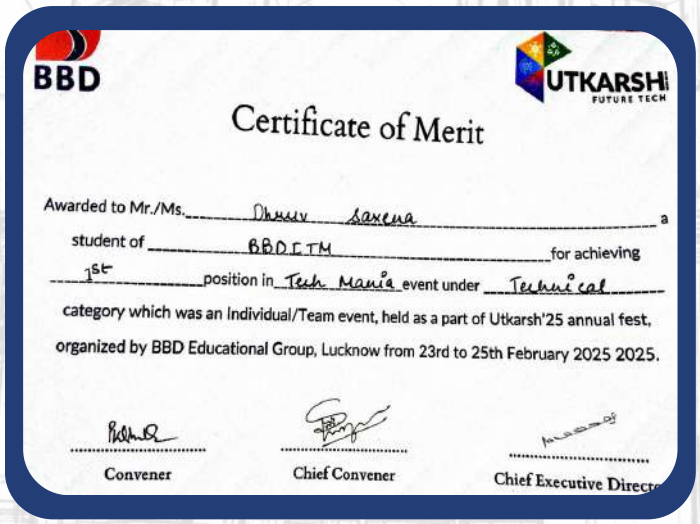
student of BBDITM for achieving

Second position in fine arts event under Gesture frame

category which was an Individual/Team event, held as a part of Utkarsh'25 annual fest,

organized by BBD Educational Group, Lucknow from 23rd to 25th February 2025 2025.

Convener | Chief Convener | Chief Executive Director



BBD

UTKARSH FUTURE TECH

Certificate of Merit

Awarded to Mr./Ms. Dhruv Saxena a

student of BBDITM for achieving

1st position in Tech Mania event under Technical

category which was an Individual/Team event, held as a part of Utkarsh'25 annual fest,

organized by BBD Educational Group, Lucknow from 23rd to 25th February 2025 2025.

Convener | Chief Convener | Chief Executive Director

Dr. A. P. J. ABDUL KALAM TECHNICAL UNIVERSITY, UTTAR PRADESH, LUCKNOW

DR. ABDUL KALAM INTER-TECHNICAL UNIVERSITY SPORTS FEST, 2024-25

(ZONAL LEVEL)

Organized at

BABU SUNDER SINGH INSTITUTE OF TECHNOLOGY & MANAGEMENT, LUCKNOW

(Zonal Centre)

CERTIFICATE

This is to certify that Mr./Ms. Shikhar student of Babu Banarasi Das Institute of Technology & Mgt. Lucknow.

Roll No. 2200541539005 has participated in Kho-Kho (Boys) event

and secured I^st position at Dr. Abdul Kalam Inter-Technical University Sports

Fest, 2024 - 25 (Zonal Level) held on 24th & 25th October 2024.

Mr. Abhishek Singh, Coordinator, BSSITM Lucknow (Zonal Centre) | Prof. R.S. Mishra, Director, BSSITM Lucknow (Zonal Centre) | Prof. O. P. Singh, Dean Student Welfare, Dr. APJ AKTU Lucknow | Prof. J.P. Pandey, Vice-Chancellor, Dr. APJ AKTU Lucknow

BBD UNIVERSITY

SOCA

SCHOOL OF COMPUTER APPLICATIONS

BABU BANARASI DAS UNIVERSITY

CERTIFICATE OF PARTICIPATION

This is to certify that Mr./Ms. Shubham Kumar Dubey

of B Tech CS 24 has participated in the event

'Software Exhibition' held on 6th December, 2024 at CA Block, SOCA, BBD University, Lucknow.

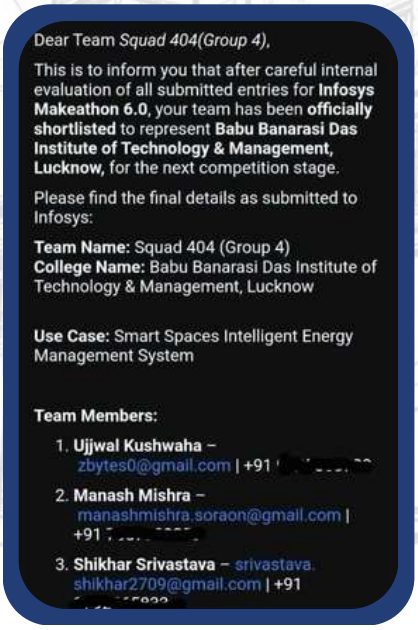
DR. PRABHASH C PATHAK
Head (School of Computer Applications)

DR. REENA SRIVASTAVA
Dean (School of Computer Applications)

BBDITM

SPORTS & CULTURAL FEST
2024 – 25

SPORTS & CULTURAL FEST
2024 – 25


Dear Team *Squad 404(Group 4)*,

This is to inform you that after careful internal evaluation of all submitted entries for **Infosys Makeathon 6.0**, your team has been **officially shortlisted** to represent **Babu Banarasi Das Institute of Technology & Management, Lucknow**, for the next competition stage.

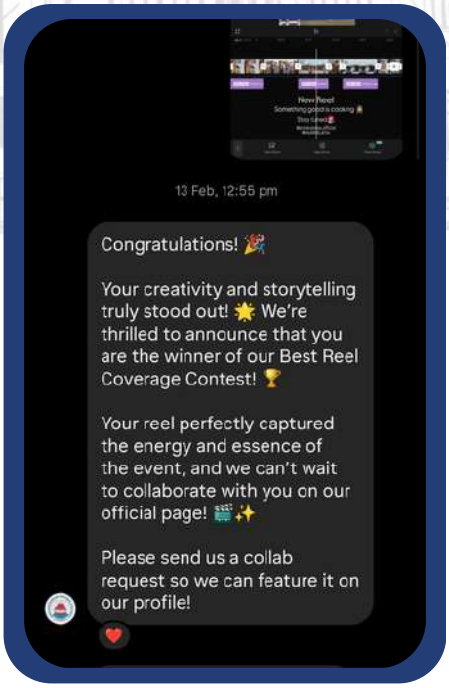
Please find the final details as submitted to Infosys:

Team Name: Squad 404 (Group 4)
College Name: Babu Banarasi Das Institute of Technology & Management, Lucknow

Use Case: Smart Spaces Intelligent Energy Management System

Team Members:

1. **Ujjwal Kushwaha** – zbytes0@gmail.com | +91
2. **Manash Mishra** – manashmishra.soraon@gmail.com | +91
3. **Shikhar Srivastava** – srivastava.shikhar2709@gmail.com | +91



BBDITM

VIRTUAL MASTER CLASS
2024 - 25

- **Mr. Shubham Kumar Mishra was awarded for successfully completing the course "Introduction to Artificial Intelligence" on February 6th,2025 by *Infosys SpringBoard*.**
- **Mr. Shubham Kumar Mishra was awarded for successfully completing the course "Introduction to Deep Learning" on February 6th,2025 by *Infosys SpringBoard*.**
- **Mr. Shubham Kumar Mishra was awarded for successfully completing the course "Introduction to Data Science" on May 31st,2025 by *Infosys SpringBoard*.**
- **Mr. Shubham Kumar Mishra was awarded for successfully completing the course "Introduction to Natural Language Processing" on February 7th,2025 by *Infosys SpringBoard*.**
- **Mr. Shubham Kumar Mishra has successfully completed a 4-week course on Soft Skills Course Online-Complete Professional Development Training by *GeeksforGeeks*.**

BBDITM

VIRTUAL MASTER CLASS
2024 – 25

WHISPERING PAGES

- **The Algorithm of Life:**

In computer science, we believe every problem has a solution if not today, then after enough debugging. But what if life itself is just another algorithm?

We wake up, follow routines, make decisions based on conditions, and loop through habits. Some days feel like infinite loops, while others break us out with unexpected exceptions.

Unlike machines, though, we don't always get predictable outputs. And that's where life becomes more beautiful than code. There are no syntax errors in emotions, no compiler warnings for wrong decisions just experiences that shape our logic over time.

Maybe the goal isn't to optimize life like code, but to understand it like an evolving system learning, adapting, and sometimes, simply running without knowing the final output.

***By*- Himanshu Srivastava**
2400541530076
2nd Year, AI-ML22

WHISPERING PAGES

- **Code and Chaos:**

In the world of programming, we often chase perfection. Clean syntax, optimized logic, and predictable outputs give us a sense of control like everything is exactly where it should be. But step outside the screen, and life refuses to follow the same rules.

Unlike code, life doesn't come with documentation. It throws unexpected errors, crashes without warning, and rarely offers a clear debugging guide. We make plans like structured functions, yet outcomes remain uncertain. And still, we continue looping through failures, learning from each breakdown, and rewriting parts of ourselves along the way.

What programming quietly teaches us, however, is resilience. Every bug fixed is a reminder that mistakes are not the end, but part of the process. Every failed run pushes us to think differently, to adapt, to improve.

Maybe life isn't meant to be perfectly coded. Maybe it's meant to be experienced messy, unpredictable, and beautifully unfinished. Because in the end, beyond logic and structure, the most meaningful creation we build isn't a program it's who we become while trying.

By- Mohd Ayan
2400541530093
2nd Year, AI-ML22

WHISPERING PAGES

- **"भारत का भविष्य":**

मैं भारत का चेहरा हूँ।
मैं तकनीकी दौर से गुजर रहा नव निर्माण का परिकल्पना हूँ।
मैं चलन युग की नींव में, नव पीढ़ी की सूरत हूँ।
मैं देख रहा जिस मंज़र को, एक नया भारत का चेहरा हूँ।
मैं सूरज सा तेज लेकर, मैं जल रहा प्रतीप हूँ।
मैं क्रांति बुद्धिमत्ता से लेकर, स्वच्छता का परिणाम हूँ।
मैं तकनीकी दौर से गुजर रहा, एक नये भारत का चेहरा हूँ।
मैं एक अंत से जन्मा,
नव युग का आरम्भ हूँ।
मैं अंधकार-उजाले समेत रहा,
नई दिशा के समंदर में,
भारतीय अखंडता का परिचय हूँ।
मेरे यश-गुण के जी रहो,
भारत का प्रत्येक वासी हूँ।
मैं तकनीकी दौर से गुजर रहा,
नव निर्माण की परिकल्पना हूँ।
मैं चलन युग की नींव में,
नव पीढ़ी की सूरत हूँ।
मैं देख रहा जिस मंज़र को,
एक नये भारत का चेहरा हूँ।
एक नये भारत का चेहरा हूँ॥

By- Anushka Srivastava
2200540100042
4th Year, CSE

WHISPERING PAGES

- **"श्मशान":**

मेरे मन के भीतर, जब बढ़ गया अभिमान,
गलतफहमी दूर करने, मैं चला गया श्मशान,

न हवाओं में वो हिम्मत थी कि उन लपटों को बुझा सके,
न अपनों में वो ताकत थी कि अपनों को उठा सके,

सेठ भी झुलस गया पैसों के छलावों में,
बचपना भी न बच सका अंगारों की उन बाहों से,

न दौलत दिखी न खूबसूरती, राख के उस ढेर में,
सो गया वो व्यक्ति जो जागता हर सवेर में।

***By*- Saourya Pratap Singh**
2300540100154
3rd Year, CSE-33

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