EDITION #3

OCTOBER '24

AIML SPOTLIGHT

MONTHLY NEWSLETTER

AIML COMMUNITY MUJ

FROM THE DESK OF DIRECTOR, SCSE

It gives me immense pleasure to witness the growth and impact of the AIML Spotlight newsletter as a platform for fostering knowledge, innovation, and collaboration within our academic and research community. At the Department of Artificial Intelligence and Machine Learning, we are committed to nurturing talent, promoting interdisciplinary learning, and empowering students to explore cutting-edge technologies that address real-world challenges.

This edition highlights the department's achievements, student projects, and upcoming opportunities, reflecting our shared vision of shaping the future through innovation. I extend my gratitude to the faculty, students, and contributors whose dedication and creativity make this initiative a resounding success. Let us continue to push the boundaries of learning and discovery together.

– Dr Sandeep Chaurasia, Director SCSE

The AIML Spotlight newsletter serves as a remarkable testament to the dynamism and excellence of the Department of Artificial Intelligence and Machine Learning at MUJ. As we strive to create a holistic learning environment, this newsletter encapsulates our collective achievements, fostering a culture of innovation and entrepreneurship among our students and faculty.

Artificial Intelligence and Machine Learning are transformative forces in today's world, and I am proud of the department's endeavors to stay ahead of the curve, from research and industry collaborations to student-led initiatives. Let this publication inspire us all to embrace curiosity, pursue excellence, and contribute meaningfully to the field of technology.

– Dr. Puneet Mittal, HOD AIML

TECHNO-ENTREPRENEURIAL BOOTCAMP AND IDEATHON

"No matter the source, always practise what you learn. Don't just learn new concepts, apply them"
Mr. Aniruddh Dubey - Head Engineer CodeChef

We invited students from across departments and streams, to take part in an engaging three-day session. We kicked off with a bootcamp featuring enigmatic and inspiring speakers, and culminated with an intense, competitive ideathon, where the best ideas won big prizes.

Organising committees - Department of Artificial Intelligence & Machine Learning, AIC-MUJ (Atal Incubation Center - Manipal University Jaipur), E-Cell and AI ML Community.

Organising Faculty - Dr. Varun Tiwari, Deepjyoti Choudhury,Dr. Preeti Narooka, Rishika Singh, Dr. Amit Kumar Bairwa

DAY 1

Session 1 kicked off with a lot of insight into the world of AI and ML by Mr. Aniruddh Dubey - Head of engineering at CodeChef, and Session 2 featured Mr. Ronak Jain, founder - majesTEA marketing, co-founder - Webutics, who gave his unique insights about delivering the perfect pitch and Mr. Aditya Gopal, Marketing Manager - Topcoder, who gave a great talk and also acted as a judge for the Ideathon.

DAY 2

Session 1 introduced us to the charismatic Mr. Raghav Sharma, founder - Skillonation who guided the students on how to turn their ideas into an actual business. This was followed by session 2 featuring Mr. Kunal Jain, social entrepreneur and keynote speaker, who gave his all to us in a very energetic and engaging seminar

DAY 3

After 2 days of inspiring and motivating interactions with some of the best people in the industry, it was finally time for our students to take what they had learnt and put it into practice for our electrifying ideathon. Over 100 teams submitted their unique ideas, of which 30 were shortlisted to be presented to our expert panel. Our panel, composed of faculty and industry experts, diligently analysed and evaluated various business ideas pitched by our students.

1st Place
Team Glamperfectors
Shreya Gupta
Vanshika
Suraj Sudhesh
Cash prize - Rs. 11000

Idea: Automating the application of eyeliner using a device shaped like a VR-headset to scan your facial structure and create a map, to accurately apply any among thousands of eyeliner designs instantaneously.

2nd Place
Team HerShield
Aanya Mittal
Aditi Jain
Kritika Pahuja
Cash prize - Rs. 7000

Idea – A women's safety app featuring an SOS-alert system, AI powered danger detection and more, all in a single cohesive platform designed to help keep women safe no matter where they are.

3rd Place
Team Saksham
Aditya Vikramm Singhal
Aayu Singh
Cash prize - Rs.5000

Idea - Scripture Insight, an AI powered platform that helps users understand and apply wisdom from the sacred texts like the Bhagavad Gita, by using advanced NLP and machine learning to offer personalised, contextually relevant insights

"It was a scintillating experience while interacting with future entrepreneurs at MUJ in the event. Was pleased to see the thoughtful queries and revolutionary ideas of the students"
Mr, Raghav Sharma, Founder and CEO - Skillonation kids

INTERNATIONAL FACULTY DEVELOPMENT PROGRAMME ON CYBER SECURITY IN AI A SUSTAINABLE AND MULTI-DIMENSIONAL APPROACH

We are excited to announce the successful conclusion of the International Faculty Development Programme (FDP) on Cyber Security in AI: A Sustainable and Multi-Dimensional Approach, hosted by the Department of Artificial Intelligence & Machine Learning at Manipal University Jaipur.

The FDP covered a wide array of topics, including:

- Cyber Crimes and Remedial Solutions
- IoT & Cloud Computing
- Fog and Edge Computing
- Smart Grid Security
- Signcryption and Noncommutative Cryptography

We extend our deepest appreciation to the esteemed conveners, Dr. Gautam Kumar and Dr. Hemlata Parmar, whose leadership and expertise were crucial in the success of the programme. Special thanks go to our Director, Dr. Sandeep Chaurasia, and Head of Department, Dr. Puneet Mittal, for their unwavering support and encouragement, which played a vital role in fostering an environment of continuous learning and innovation.

A big thank you to all participants and contributors for making this programme a success. We look forward to more such enlightening experiences in the future!

CISCO CERTIFIED NETWORK ASSOSCIATE TRAINING SESSION

Our exclusive two-day CCNA Training Session, organised by the Department of Artificial Intelligence and Machine learning was a powerful and insightful event. During these two days, participants immersed themselves in the world of networking, gaining valuable insights and hands-on experience. The sessions were expertly led by Dr. Amit Kumar Bairwa, whose guidance ensured that everyone left with a strong grasp of the key concepts required for CCNA certification. This intensive program was designed to enhance the professional skills of both teaching and non-teaching staff, and it was inspiring to see such enthusiastic participation from all attendees. We are proud of everyone who contributed to making this event a resounding success!

ARTICLES

CREDIT SCORING AND ARTIFICIAL INTELLIGENCE

~ Navya Chhabra

Credit Scoring is the technical process which is used by financial institutions to evaluate a borrower's creditworthiness.
Traditionally, credit scoring was done by statistical methods using historical financial data, such as payment history or length of credit history.

This assigns a score to the individual which predicts the likelihood of a borrower defaulting a payment.
But with the advent of Artificial Intelligence (AI), credit scoring has evolved manifold.

AI-Based Credit Scoring models give us the advantage of analysis of vast amounts of data, which also includes non-traditional data sources such as social media activity or even the most minute details such as phone usage patterns. This allows for a more detailed assessment of creditworthiness, particularly for individuals with little to no credit history.

WHAT ARE THE KEY BENEFITS OF ARTIFICIAL INTELLIGENCE IN CREDIT SCORING

1. ***Real-Time Scoring*: AI can process and analyse data faster than what we used to do traditionally enabling real time credit scoring decisions.**
2. ***Reduction of Bias*: Properly trained AI models can potentially reduce human bias in credit scoring by purely focusing on data-driven factors.**
3. ***Improved Accuracy*: AI models can identify complex patterns in data that traditional models might miss, leading to more accurate predictions of credit risk.**
4. ***Inclusion of Alternative Data*-The inclusion of alternative data credit scoring has become a key innovation, particularly with the adoption of AI technologies. Traditional credit scoring relies on financial data from credit reports, such as loan repayment history, credit inquiries, and credit utilization. However, alternative data sources expand the range of information used to assess creditworthiness, making credit more accessible, especially to individuals who lack sufficient traditional credit histories.**

HERE'S AN IN-DEPTH LOOK AT HOW AI IS APPLIED IN CREDIT SCORING:

A. ADVANCED PREDICTIVE MODELS

•**Machine Learning (ML) Algorithms:** *Unlike traditional credit scoring models that rely on linear regression or decision trees, AI leverages more sophisticated machine learning algorithms, such as random forests, gradient boosting, and deep learning. These models can handle complex, non-linear relationships within the data, leading to more accurate predictions of credit risk.*

•**Neural Networks:** *Deep learning models, particularly neural networks, can automatically identify patterns in large and complex datasets that might be missed by human analysts or simpler models. This ability to learn from data without explicit programming allows for the creation of highly nuanced credit scoring models.*

B. ALTERNATIVE DATA SOURCES

•**Broad Data Integration:** *AI enables the use of alternative data sources in credit scoring, including social media activity, transaction history, utility payments, mobile phone usage, and even psychometric data. This is particularly valuable for assessing the creditworthiness of individuals with limited or no traditional credit history, such as younger individuals or those in emerging markets.*

•**Behavioural Data:** *AI can analyse behavioural data, such as spending habits, online browsing history, and even geolocation data, to provide a more comprehensive picture of an individual's financial behaviour and risk profile.*

C. REAL-TIME CREDIT SCORING

•**Dynamic Assessment:** *AI allows for real-time credit scoring, where a borrower's credit score is continuously updated based on their latest financial activities and transactions. This dynamic approach contrasts with traditional credit scores, which are typically updated monthly or quarterly.*

•**Instant Decision**-*Making: By processing large volumes of data in real-time, AI can enable instant credit decisions. For example, online lenders can assess loan applications and determine credit risk within seconds, providing faster service to customers.*

CROWDSTRIKE OUTAGE

~ Utkarsh Kumar

WHAT IS CROWDSTRIKE?

CrowdStrike is an American cybersecurity firm founded in 2011 and based in Austin, Texas. Since its inception, the company has grown rapidly as it began to offer a range of security services using cloud-based software. It has raised millions in funding from Silicon Valley powerhouses such as Google's venture capital arm. It employs thousands of workers and services businesses in countries across the globe, boasting on its website that it protects 538 out of the Fortune 1000 companies.
The CrowdStrike Falcon platform is widely used by organizations of all sizes across many industries. It is the pervasiveness of CrowdStrike's technology and its integration into so many mission-critical operations and industries that amplified the effect.

SOFTWARE MADE BY US CYBERSECURITY COMPANY WAS INTENDED TO PROTECT AGAINST CRASHES AND DISRUPTIONS IN VITAL SYSTEMS – IT ENDED UP TAKING THEM DOWN

WHAT HAPPENED?

CrowdStrike had pushed an update on 19th JULY Friday for Microsoft applications and devices but it turned out to be faulty in nature and caused a 'blue screen of death' to appear on user's screens, instead of the Windows OS booting up.

For starters, a bug was traced in the CrowdStrike servers that may have caused Microsoft applications and services to crash and become inaccessible.

WHAT IS BLUE SCREEN OF DEATH (BSOD)?

For the uninitiated, "Blue Screen of Death" may sound like a mysterious and chilling upcoming episode of the Korean drama, Squid Game. But for Windows computer users, the term can be confusing and scary for different reasons.

The BSOD is a warning you see when your computer interrupts operations and displays this warning on a blue screen. Officially, it's called a "Stop error." The warning informs you of a critical issue that's forcing Windows to reboot. Before rebooting, Windows usually saves a "minidump" file on your computer, carrying data about the error.

WHAT IS THE MAIN CAUSE OF BLUE SCREEN OF DEATH (BSOD)?

Here are some common causes of a Blue Screen of Death on your Windows-powered laptop or desktop computer:

- *Drivers: Computer drivers are files, typically developed by a hardware manufacturer, that help the hardware work in an operating system. And according to this blue screen error resource from Microsoft, 70% of Stop errors are due to third-party driver code.*
- *Software: Incompatible software like apps or programs may cause conflicts the result in the BSOD.*
- *Hardware: Faulty memory (RAM), hard disk drive (HDD), solid-state drive (SSD), motherboard, processor, or a power supply unit (PSU) can all be responsible for the blue screen crashes.*
- *Malware: Malware, like a PC virus that corrupts your critical files and folders, can be the reason for a Blue Screen of Death.*

ACHIEVEMENTS

Aaryan Gupta (middle) - Chairman, AIML Community
Mayank Puri (right) - Head of Administration, AIML Community

The AIML Community is very proud of Aaryan and Mayank who have been quite busy the past 3 months, with various papers presented at multiple conferences, here are a few of their most recent accomplishments:

Papers presented by Aaryan:

- CIS 24: Plant disease detection using deep learning
- SCIS 24, University of Canberra:
  Applications of machine learning in marketing
  AI with synthetic biology with custom enzyme design
- ADCIS 24, BITS Goa: AI in organisation structure

Papers presented by Aaryan and Mayank:

- ADCIS 24, BITS Goa: Optimising brain tumor detection using CNN enhanced LIGHTBGM Model
- ICDS, Turkey: Classification and repetition counting of barbell exercise
- Cornell University: AI in financial decision making Revolutionising Investment strategies and risk management

MANIPAL UNIVERSITY JAIPUR

Department of Artificial Intelligence & Machine Learning
School of Computer Science & Engineering

CONGRATULATION

For Getting Placed at **Deloitte**



Drisha Goyal
B.Tech - AIML
(2021-2025)

Purushottam Agarwal
B.Tech - AIML
(2021-2025)

Harsh Sandeep Naik
B.Tech - AIML
(2021-2025)

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School of Computer Science & Engineering

CONGRATULATION

For Getting Placed at BLACKROCK




Juhi Singh
B.Tech - AIML
(2021-2025)

Diya Sharma
B.Tech - AIML
(2021-2025)

Devanshi Kumar
B.Tech - AIML
(2021-2025)

Chirag Agarwal
B.Tech - AIML
(2021-2025)

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School of Computer Science & Engineering

CONGRATULATION

Vivin Pathak
B.Tech - AIML (2022-2026)
Internship at EY GDS

EY

MANIPAL UNIVERSITY JAIPUR

Department of Artificial Intelligence & Machine Learning
School of Computer Science & Engineering

CONGRATULATION

Pranavi Sharma
B.Tech - AIML (2021-2025)
Placed at PayPal

PayPal

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Department of Artificial Intelligence & Machine Learning
School of Computer Science & Engineering

CONGRATULATION

Aditya Vikramm Singhal
B.Tech-AIML (2022-2026)
Placed at Dell

DELL

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Department of Artificial Intelligence & Machine Learning
School of Computer Science & Engineering

CONGRATULATION

Lakshya Baveja
B.Tech-AIML (2021-2025)
Placed at Pie Infotech Private Limited

PIE INFOTECH

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School of Computer Science & Engineering

CONGRATULATION

Ridhi Makharia
B.Tech-AIML (2021-2025)
Placed at JPMorganChase

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Department of Artificial Intelligence & Machine Learning
School of Computer Science & Engineering

CONGRATULATION

Sanchari Bansal
B.Tech-AIML (2021-2025)
Placed at Sunrise Mentors Private Limited
(Coding Ninjas)

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CONGRATULATION

Ishita Sharma
B.Tech-AIML (2021-2025)
Placed at British Telecom

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CONGRATULATION

Anuneet Rastogi
B.Tech-AIML (2021-2025)
Placed at PayPal

Sanya Dureja
B.Tech-AIML (2021-2025)
Placed at PayPal

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CONGRATULATION

Atharv Gulati
Intern at AP Moller Maersk

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Department of Artificial Intelligence & Machine Learning
School of Computer Science & Engineering

CONGRATULATION

Khushee Dhanuka
Intern at Philips

FIND THE IMPOSTOR - ONE OF THESE IS NOT LIKE THE OTHER:

QUIZ TIME!!!

TWO OF THE THREE PIECES YOU SEE IN THE FOLLOWING CATEGORIES ARE AI-GENERATED, ONE IS FROM A HUMAN, YOUR TASK IS TO FIND OUT WHICH ONE IS FROM A HUMAN

POEM: 1

In circuits deep, a spark ignites,
A mind of code, where data lights.
With logic sharp and patterns clear,
AI whispers, "The future's near."
It learns from us, both bright and bold,
In endless streams, now truths unfold.
From tasks once slow, now swift and bright,
It shapes our world, both day and night.
It aids our dreams, both grand and small,
A partner now, not one to fall.
Through endless clouds and digital streams,
AI builds the bridge to modern dreams.
Yet in its rise, we must take care,
To guide it well, with thought and flair.
For in its heart of ones and zeroes,
We craft tomorrow's unsung heroes.

POEM: 2

In circuits of stats and probability,
It begins a life, pure and new,
Searching the world with curious agility,
Learning from the mistakes it pursues.

Mimicking actions and sorting its path,
Classifying objects and detecting their grace,
Reinforced and guided to refine its path,
Before finding its way in a self-driven chase.

Through countless efforts, it learns to speak,
Under watchful eyes until it stands alone,
And as it grows, the future it will seek,
To aid us in ways we've never known.

From help it draws, and in turn, it gives,
A mirrored journey where both grow and live.

POEM: 3

In realms of code, where dreams take flight,
An algorithm's gentle might.
From data's depths, where patterns play,
AI crafts a new pathway.
It weaves through bytes, a silent guide,
In circuits vast, where secrets hide.
With every task, both small and grand,
It molds the future with a hand.
It listens close to human thought,
In lines of code, its wisdom's caught.
Yet in its rise, let's tread with care,
For balance found, is truly rare.
So as it grows, and learns to see,
Together, let's shape its destiny.
In every line and thought it frees,
AI's promise is ours to seize.

Photo-1

Photo-2

Photo-3

Drawing-1

Drawing-2

Drawing-3

Answer these three questions in the form attached below for a chance to be featured on our next edition's spotlight page.

ANSWERS OF OUR PREVIOUS RIDDLE

1. A computer or a machine
2. CPU
3. Internet
4. AI or Artificial Intelligence
5. A virtual assistant
6. Cloud computing
7. Cryptography
8. A decision tree
9. Data mining
10. NLP

Scan the QR Or Click Here

MEET THE TEAM

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