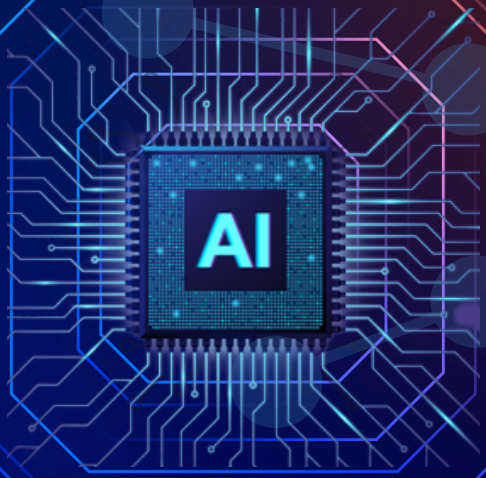
BMS INSTITUTE OF
TECHNOLOGY AND MANAGEMENT

CIRCADIAN

THE OFFICIAL MAGAZINE OF
THE DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



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FOUNDERS

Shri B. M Sreenivasaiah
Founder, BMS Institutions

Shri B. S. Narayan
Founder & Donor Trustee

The history of BMS institutions rewinds back to the year 1946 with the establishment of the first private engineering college in the country, BMS College of Engineering (BMSCE), by late Sri B.M Sreenivasaiah. He was a philanthropist and a great visionary who realized the necessity of technical education even before the country got independence. He was honored by the Maharaja of Mysore with the title “Dharma Prakasha Raja Karya Prasaktha” for his extraordinary service in the field of education. The legacy he once began is being upheld with the same zeal by his inheritors and they continue to cherish his vision and ideals. After the sad demise of Sri B.M Sreenivasaiah, his renowned son, Sri B.S Narayan, a vibrant and ingenious personality, molded BMS College of Engineering into one of the finest engineering colleges. Apart from BMS College of Engineering, he had also established other institutions that promoted higher education which includes BMS College of Law, BMS College of Women, and BMS Evening College of Engineering. He was extremely supportive in the initiation of several collaborative programs such as training foreign students under the International Co-operative Division, cross-cultural programs with Melton Foundation U.S.A, etc. BMS Institute of Technology (BMSIT), established in the year 2002 is one of the six institutions under BMS Educational Trust, is managed by a council of trustees appointed by Dr. B.S. Ragini Narayan, the successor of Late Sri B.S Narayan and the donor trustee and Member Secretary of BMS Educational Trust and it is one of the best engineering college in Bangalore. BMS School of Architecture is the latest addition to the BMS group of institutions

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VISION & MISSION

VISION :

To develop professionals equipped to build sustainable and intelligent solutions that effectively interact with the natural intelligence towards creating a digitally empowered environment for future generations, safeguarding social ethics.

MISSION :

- To enable students with the spirit and power of interdisciplinary acumen by integrating a world of knowledge into a world of intelligent systems and subsystems.
- boost academic outcomes through place-based education and collaborations with establishment reserach labs and industries.
- Encourage entrepreneurship efforts among students and develop them into great leaders.

HOD'S MESSAGE

Encountering a highly intensive and challenging academic program that pushed each one of us to work beyond limits. Geared up to face new challenges and to meet them with poise and grace. Hard work is obligatory if we want to get anywhere in life. We can accomplish what we aspire for with the right mind-set, a positive attitude, and above all, self-discipline.

With the strain socio-economic situation everyone around is effected and facing their part of stress. Imagining the normal soon seems a dream. I look forward to partnering with you all to ensure every student is celebrated and supported. Together, we will ensure that we maintain our tradition of excellence and make Department of AI&ML a special branch.

I have devoted my career to educating and advocating for students, both as a classroom teacher and as an administrator. We are looking forward to bring passion, enthusiasm and experience to cultivate the academic excellence and nurture the hidden potential in every student. We at the department aim at the integral development of each student and lay a lot of impetus on honing every aspect of student's personality that works towards nurturing them in to a happy and well-equipped human being.

During this unprecedented time, the department has earned all the support and cooperation from each and every parent, guardian, student, faculty member all the stakeholders at every step and I look forward to the same collaboration and support so that we embrace all the challenges with confidence, steadfastness ,fortitude to offer the holistic education towards which we are striving.

Appreciate the efforts of all the office bearers of Circadian and Brainium .

Best Wishes

-Mrs. Bharathi (HoD, AI&ML)

COMMITTEE INTRODUCTION & THEIR MESSAGE

COMMITTEE INTRODUCTION & THEIR MESSAGE

INTRODUCTION TO BRAINIUM

BRANIUM - The technical forum of the department of Artificial intelligence and machine learning has evolved over the last one year. The main aim of this forum is to help students develop skills and knowledge, which can be applied into their projects and future careers. The forum hosts a plethora of events such as workshops, webinars, cultural and technical fests, and expert talks, helping the students connect with the best of the industry.

AAAI

It brings us immense exuberance to share that Branium is now a member of the AAAI (**ASSOCIATION FOR THE ADVANCEMENT OF ARTIFICIAL INTELLIGENCE**) organization, a rightful place for the students of our institution to be exposed to the plethora of opportunities that lie ahead.

Founded in 1979, the Association for the Association for the Advancement of Artificial intelligence (AAAI) is a nonprofit scientific society devoted to advancing the scientific understanding of the mechanisms underlying thought and intelligent behavior and their embodiment in machines. AAAI aims to promote research in, and responsible use of, artificial intelligence. AAAI also aims to increase public understanding of artificial intelligence, improve the teaching and training of AI practitioners, and provide guidance for research planners and funders concerning the importance and potential of current AI development and future directions.

Members throughout the world benefit from AAAI's efforts in research. Major AAAI activities include organizing and sponsoring conferences, symposia and workshops; publishing a quarterly magazine for all members, publishing a series of books, proceedings, and technical reports; compiling a host of online resources and publications; and awarding grants and scholarships.

AAAI is committed to fostering student interest and development in the field of artificial intelligence. Student members are eligible for conference grants and fellowships, and receive publishing opportunities through AAAI conferences, workshops, and symposia.

Special networking and mentoring events are offered at the annual AAAI conference, as well as other AAAI meetings. AAAI promotes student career advancement through its annual job fair program and through recognition of exceptional work with special student research awards.

QUANTUM AI

What is quantum computing?

Quantum computing is a field wherein the quantum properties such as interference, polarisation and entanglement are used to perform computation. Unlike classical computers that use classical bits, 0 or 1, quantum computers make use of 'qubits'. A qubit is a linear combination of the two classical bits, where the classical bits are written as |0> and |1>. That is, a qubit can either be |1> or |0> depending upon the probability amplitudes corresponding to the classical bits. This linear combination is called superposition. Operators, called quantum gates, operate on the qubits and transform them. Application of successive quantum gates is a quantum algorithm.

What is quantum AI?

Quantum computing is a field of study that focuses on the creation of computer-based technologies based on quantum theoretical principles. On the quantum (atomic and subatomic) level, quantum theory describes the nature and behaviour of energy and matter. To perform specific computational tasks, quantum computing employs a combination of bits.

QUANTUM AI

Quantum computers represent a significant advancement in computing capability, with enormous performance benefits for specific use cases. Quantum computers are designed to perform tasks much more accurately and efficiently than conventional computers, providing developers with a new tool for specific applications. All of this is accomplished at a far better efficiency than their traditional counterparts.

Quantum computers would take seconds for computing something that classical computers would take years to compute. In quantum AI, quantum computers are used to process the machine learning algorithms, also being used as they offer superiority over the classical computers and can handle large amounts of data very quickly.

At its most fundamental level, classical computing is based on ideas defined by Boolean algebra. At every moment in time or bits, data must be handled in an exclusive binary state. We begin to reach the physical constraints of materials and the threshold for classical physics to apply as we advance to smaller and quicker circuits. The quantum universe takes over after that.
A variety of elementary particles, such as electrons or photons, can be employed in a quantum computer, with their charge or polarisation acting as a representation of 0 and/or 1. The nature and behaviour of these particles form the cornerstone of quantum computing. Each of these particles is known as a quantum bit, or qubit. Quantum computing uses the concepts of superposition and entanglement to create an enhanced computing power.

QUANTUM AI

Why do we need quantum AI?

A classical register can store only one of the four possible binary combinations, that is, 00, 01, 10 and 11. Whereas, a quantum register can store all the four possible combinations simultaneously and would collapse to give one value only after the quantum gate operates on the qubit. So, if more qubits are added, capacity is increased exponentially. We produce 2.5 exabytes of data every day. Quantum computers can manage huge amounts of data very quickly. Quantum computing can potentially help in artificial intelligence to process very large amounts of data in order to make better decisions, for instance, facial recognition.

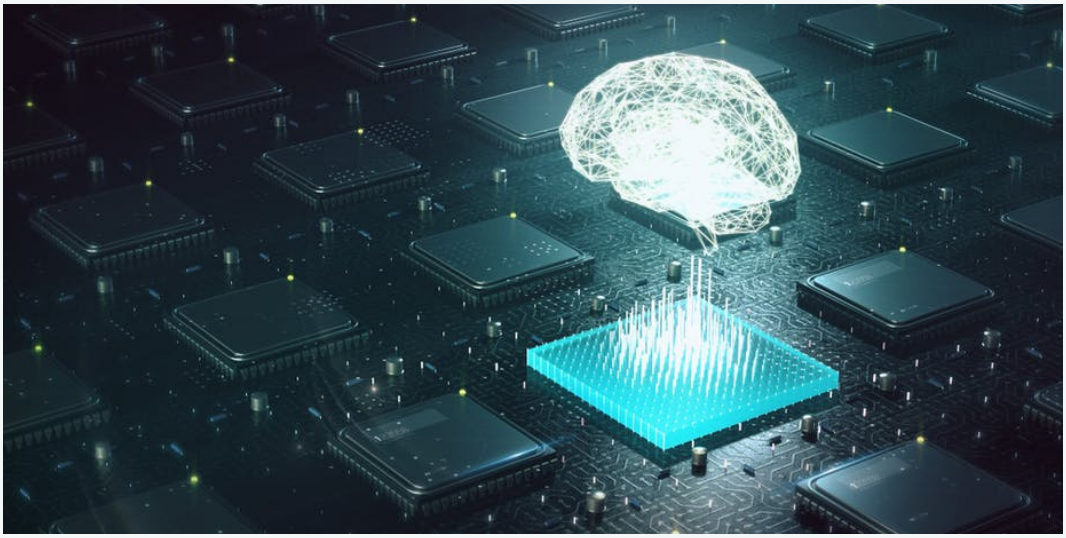
QUANTUM AI

Applications of quantum computing in AI

- Quantum computers are designed to manage huge amounts of data, along with uncovering patterns and spotting anomalies extremely quickly. With each newly launched iteration of quantum computer design and the new improvements made on the quantum error-correction code, developers are now able to better manage the potential of quantum bits. Also optimizes the same for solving all kinds of business problems to make better decisions.

- Quantum computers can complete calculations within seconds, which would take today's computers many years to calculate. With quantum computing, developers can do multiple calculations with multiple inputs simultaneously.

- Companies are losing their ties with current computing rope as the amount of data generated in industries such as pharmaceutical, finance, and life science develops. These companies now require complex models with the processing power to model the most complex situations in order to have a better data framework.



QUANTUM AI

Drawbacks of quantum computation

- ***Interference*** – During the computation phase of a quantum calculation, the slightest disturbance in a quantum system (say a stray photon or wave of EM radiation) causes the quantum computation to collapse, a process known as *de-coherence*. A quantum computer must be totally isolated from all external interference during the computation phase.
- ***Error correction*** – Given the nature of quantum computing, error correction is ultra-critical – even a single error in a calculation can cause the validity of the entire computation to collapse.
- ***Output observance*** – Retrieving output data after a quantum calculation is complete risks corrupting the data.

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ELECTRIC VEHICLES & AI

Pandemic not withstanding, electric car registrations have seen a 43% increase year on year in 2020. Battery electric vehicles (BEVs) accounted for two-thirds of new registrations. The arrival of AI has disrupted the electric vehicles ecosystem.

WHERE DO EVs LAG BEHIND?

If a driver of a gasoline-powered vehicle runs out of gas, they know what to do. They can ask a friend to bring them a full gas can, and they can also hire a towing firm and pay a hefty service fee for a few gallons of gasoline.

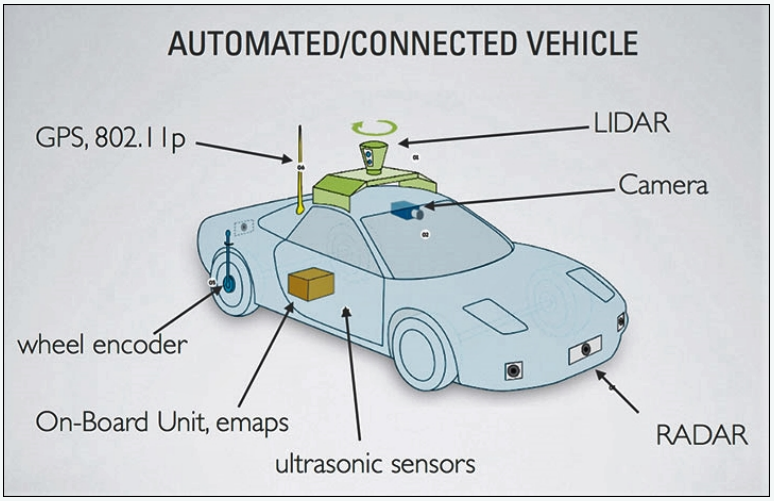
What happens when that same driver gets into an electric vehicle (EV)? We know his or her pal isn't going to walk up with a five-gallon can of electrons. Is the towing company equipped to charge that automobile on the side of the road, and if so, how long does it take? Or do they tow the car to the nearest charging station, which may be many miles away? For some automobile consumers, range anxiety remains a key obstacle to further EV adoption.

Popular EV models like Tesla Model S 100D offer 355 miles, Hyundai Kona offers 198 miles, or MG ZS EV offer 214 miles on average. Besides range anxiety, the charging time is also a cause for concern. For example, a Tesla station takes 75 minutes for full charge. The lithium-ion batteries EVs use don’t get charged quickly like polymer batteries.

ELECTRIC VEHICLES & AI

SO HOW IS AI EMPOWERING EVs?

- Batteries are highly complex components – chemically, electrically and in terms of software. But data analytics can help us to understand them better.
- Battery technology is benefiting from the power of predictive analytics and data intelligence. The predictive maintenance facilitates high battery efficiency and operational reliability. Data science, AI, and big data tools are used to improve the performance of battery packs. Machine Learning helps tap into the underlying potential and opportunity of battery life cycle management. Blending advanced electronics with IoT, data science and digital twin, Machine Learning uses the power of predictive intelligence to predict battery life, identify potential degradation/breakdown and their causes, fix delays/errors even before they arise.
- The industry is taking a number of proactive steps to limit the likelihood that an EV driver will find themselves in the unpleasant situation of going from range anxiety to range distress, there has been the development of navigation software that shows all available charging station options and lets drivers know if they might not make it to a destination without charging batteries.



ELECTRIC VEHICLES & AI

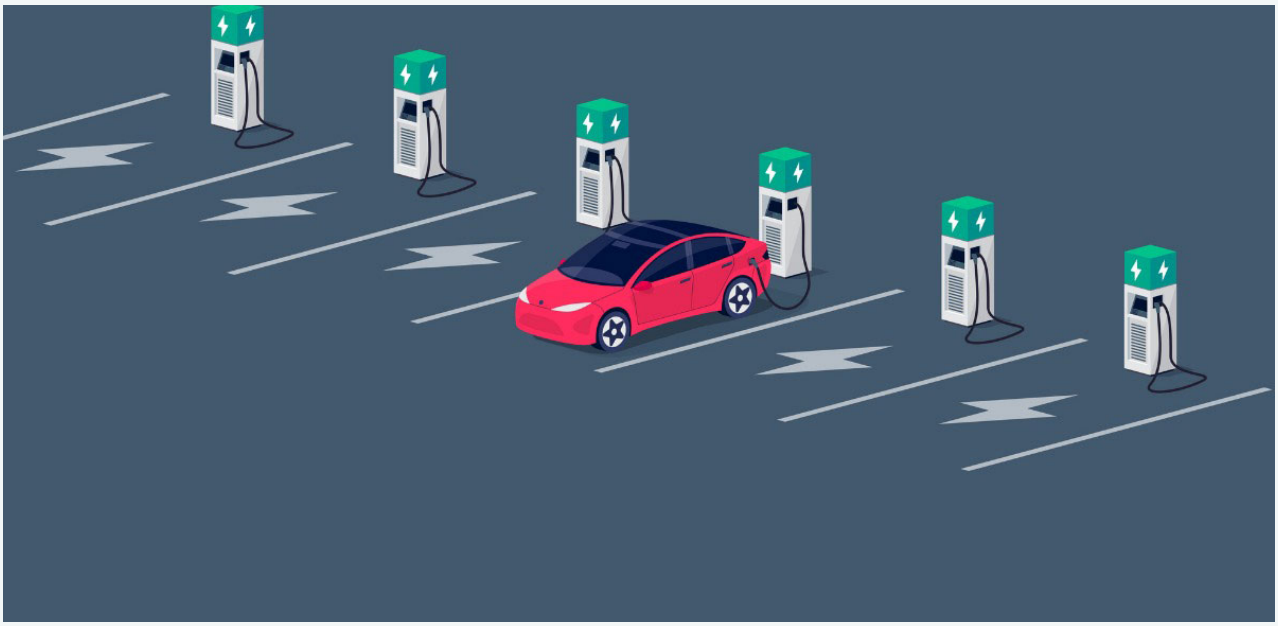
BUT HOW DOES IT MAKE A PRECISE ESTIMATION?

- A rule of thumb for EVs is that range is affected by the three Ts: terrain, temperature and technique. The first significant leap to improving the range estimate in an EV involves understanding the impact of terrain by collecting and analysing the actual energy usage of all EVs of a specific model along each stretch of roadway.
- For example, if a given model of EV uses 3kWh when driving 19km between mile markers on a highway, it would be unreasonable to assume that it would also take 3kWh to drive the 19km uphill . The route would have a few feet, say 2 feet, gain in altitude over 19km on a highway while the route uphill would make gains in hundreds of feet over the same distance. Therefore, a better estimate can be determined by tracking the actual energy use of other similar EVs on the same path by collecting the telemetry data from drivers that were already there.
- This is the idea behind products such as Bosch's Battery in the Cloud. The Tier 1 works with EV manufacturers to collect the data from EVs, analyses the data with AI, and provides information to the in-vehicle navigation system. When provided with this information, the navigation system knows what it can anticipate rather than simply hoping that the terrain in the recent past is the same as what is coming.

ELECTRIC VEHICLES & AI

BUT HOW DOES IT MAKE A PRECISE ESTIMATION?

- **Weather conditions** are a major factor in the energy demand, particularly wind speed and direction. The US Environmental Protection Agency reports that aerodynamic drag accounts for 39% of the power needed to drive an EV. Weather information at each location is readily available for AI analysis. The navigation system can also account for an unexpected windstorm and tell the driver that the situation has changed, and that getting a recharge is now necessary. This type of notification will become as routine as getting a real-time alert of a traffic accident.
- In the near future, the new car salesman will be able to show a prospective buyer that their EV does not guess its range: it knows its capabilities precisely, and the navigation systems can get you out of trouble. One more sales objection fades away, and the sale is made. AI has made the current generation of EVs a dream to drive, and future applications make things even better.



ELECTRIC VEHICLES & AI

WHAT OTHER FEATURES CAN AI PROVIDE?

- Companies like Uber and Ola are the commercial stalwarts that they are today because they provide quality services to the customer's doorstep, and EV rental companies are soon to follow in their footsteps. FLO mobility is an Indian start-up that aims to automate e-scooters and control them with zero human intervention, which would give a customer the freedom to order a scooter to their location just like they would order their favourite snack to be delivered to them. But the application of AI isn't limited to front-end services alone, the scooters can be programmed to function as self-diagnosing units and find their way to the nearest service centre if any problem were to arise. The versatility of AI doesn't stop at that either, even the maintenance and repairing process can be automated to perform as efficiently as possible by infusing elements of machine learning into it.
- These capabilities and many more like them are turning the EV market into a very profitable business prospect, which has led to the injection of massive funds into the R&D departments of EV manufacturers. This increase in funding, in turn, drives innovators to keep creating new features, and the end result is a rapidly developing field of automobiles that is all but guaranteed to be the transport of the future.

Mohammed Sinan
5th semester
AI&ML

Sudhanva
5th semester
AI&ML

4TH SEMESTER

The 4th semester started off in the spring on an online mode. The whole semester continued online, the teachers and students were comfortable with the online mode of learning after having it done for a year.

All the three internals were held online and in between the three internals, we had our PBL where all of us were motivated to think out of the box and online classes were a boon to us as they gave us more time to develop on our projects. The department also organized various events that saw a fair bit of participation from students and faculty.

A lot of students engaged themselves in internships, extracurricular activities, inter-college club activities, and additional courses. This indeed helped us all to focus on ourselves and provided us ample time to manage studies and maintain good health.

The externals were however canceled and we were marked on the basis of our internal marks and 3rd sem results.

2ND SEMESTER

The 2nd semester, though conducted online, started on a great note! An Induction Programme was organised for a period of 10 days filled with educative and entertaining activities. It gave a great start to the new semester, which was needed after the lockdown.

The next few months were jam packed with classes, online lab activities and our internals. With the remaining exams of 1st semester conducted during our 2nd semester, it was quite short and challenging. The students had a great set of teachers and a wonderful learning experience. Luckily, there were a few days of offline classes which helped us get to know our friends and teachers better. There were many activities conducted by different clubs, which were good stress busters during the online classes. Overall, it was a short and sweet semester!

WEBINARS & WORKSHOPS

Faculty Development Program

The 5 day **Faculty Development Program** (FDP) was organised by our department forum, in association with Impavid technologies. It was open to one and all, nationally to attend. The program introduced all the attendees to the basic concepts of Machine Learning through hands-on mini projects. The instructors were from both Impavid Technologies and our department.

The following topics were covered over the course of the program:

Day	Topic
Day 1	• Introduction to Jupyter Notebook • Detailed Introduction to Python Data Structures – Lists, Dictionaries, Tuples. • A comprehensive explanation about 'Numpy' and 'Matplotlib'. • Hands-on Session based on the Python Libraries – Numpy, Matplotlib in Jupyter Notebook.
Day 2	• Conversion of an image to grayscale and finding the differences between two similar • Images using the 'numpy' library. • An elaborate account on the attributes of the 'pandas' library. • Introduction to Dataframes and working with .csv files using pandas. • Learning about the possible Dataframe manipulations using a sample Student Performance dataset.
Day 3	Machine Learning concepts: • Regression – worked with Fuel Consumption and GDP of China datasets. • Logistic Regression – worked with Customer Churn data archives of a Telecommunications company. • Classification using KNN – worked with a specialized dataset based on Customer Information of a Telecommunication Company. • Decision Trees – worked with specialized dataset on Patients suffering from a particular disease. • Support Vector Machines – worked with real dataset from UCI ML Repository based on Human cells and its features to • Determine the cell type(Benign or Malignant).
Day 4	• K-Means Clustering with a dataset on Customer Segmentation. • Agglomerative Hierarchical Clustering with a dataset of predetermined car clusters.
Day 5	• Prediction model using sklearn • Server Hosting with flask • Exporting a trained model with 'pickle'. • Web Scraping using Beautiful Soup Library

WEBINARS & WORKSHOPS

Cryptocurrency & it's Bridge with Artificial Intelligence

This was the first in our series of Brainium Expert Talks. The speaker, Ms Nalayani G of EY LLP, enunciated on the topic "Cryptocurrency & its Bridge with AI". The 90-min session occurred virtually on 23rd May 2021. Ms Nalayani walked the attendees through the evolution of the concept of money followed by the relationship Cryptocurrency shares with Artificial Intelligence.
This was followed by a Q&A session which helped clear the doubts and discuss interesting points. Attendees from all over the country were present and the speaker as well as our forum received positive feedback from them.

Introduction Webinar for Huawei Web Development Program

This Webinar, held on 24th May 2021 was a precursor to the 45 day Huawei Web Development Program organized by the department of Artificial Intelligence and Machine Learning, in collaboration with Huawei Technologies, India for the students of BMSIT & M. The Speakers were from the company and industry, interacted with the attendees and introduced them to the suite of Huawei products which they could get well versed with through the course. The students were introduced to various tools and techniques that could be used to develop and deploy effective applications.

WEBINARS & WORKSHOPS

Building affordable IoT and AI Products

The second series of Brainium Expert Talk was held on 18th June 2021 in association with Intel Software, the topic being, “Building affordable IoT and AI products”. The 90-minute session was conducted virtually. The speaker, Dr. Shriram K Vasudevan demonstrated various projects on building IOT/AI products and encouraged the attendees to learn more about it. We were also provided the opportunity to watch and understand the affordable products that were built by their team. There was also an interesting Q&A session towards the end of the session in which attendees were able to clarify their queries.

Ethics in AI

The third in our Brainium Expert Talk was held on 10th June 2021 under the INDIAN SOCIETY OF TECHNICAL EDUCATION, BMSIT & M . The session started with a brief introduction to Brainium. Then the session speaker, Mr. Krishnamurthy T V from Nokia engaged the students with information on the troubles faced by AI tech with regards to ethics.
The major topics discussed during the session are:

- *What is Ethics*
- *The Ethics Dilemma of self-driving cars*
- *Asimov’s 3 rules for Intelligent Machines*
- *Model Bias, Human Bias, and ML Bias*
- *Ethical AI and Guidelines*

The event concluded with a Q&A session after which Mr Krishnamurthy offered to answer the unanswered questions as well.

FACEOFF

Brainium had hosted its first debate series “Faceoff”. It was a competition that was open for anyone to participate. The participants debated if DApps were the way forward to break the monopoly of the social media giants.

Well, this is what our winner had to say:

DApps seeking trust:

Amid the noise of social media giants abolishing freedom of speech, will DApps be able to earn a name?

One of the most sought-after human rights around the globe is no doubt the “Freedom of Speech”. While the world is full of voices rising against the suppression of people’s expressions and speech on social media there is a lot more left to understand about the scenario. Countries like Japan are already on their way to shift from centralized apps like Twitter to decentralized apps like Mastodon. But there is still a lot more to know and understand before we retrospect anything. In countries like the USA, where no legal law for hate speech has been introduced till date, countries like India have framed hate speech as a Criminal Offence under the Indian Penal Code. With over 160+ democracies around the globe it is next to impossible for a centralized social media agency to satisfy every country’s law and personal sentiments. Also, one can’t sue these companies as they are private organizations which make you accept their Terms and Conditions first and then get access to their services. The reason why Japanese are leaving Twitter and shifting to open source social media apps is because they feel twitter can’t understand their underlying cultures and it is uncomfortable to use for people of various cultures background and mindset.

FACEOFF

Now, there are various sectors which are claiming that a shift to DApps or Decentralised Apps could be a solution. The best example of this could be Mastodon. An open source platform where one can run self hosted social network services. Here, each user is a member of an Instance(node) and could interact with users of other Instances as well. Each instance has its own rules and terms of services. In a nutshell, you can choose your own instance based on your preferred terms of services but still access a large social media network. Mastodon, being a part of Fediverse allows you to interact with users on other platforms of Fediverse as well such as Peertube, Diaspora and PixelFed.

Now, people have a sense of doubt since decentralised networks always make them think of the Dark Web and it's illegal side. But, as every coin has two faces, a lethal science invention can be a beneficial one too if used in the correct sense. Mastodon is going in the right direction but it needs more users and more recognition so as to invest more in their R&D sector and strengthen their encryption methods. I am a huge Marvel Universe Fan and I believe if Robert Downry Jr. couldn't have been given a chance in the movie just because of his dark past, the world would have not been able to see his acting skills and we might have not loved the character "Iron Man" this much.

Hence, offering a chance to DApps is a must if we keep our data privacy, freedom of speech and encryption over money and belief based on the past. We might feel shifting to DApps is a decision taken too soon, but the future belongs to them.

--Santwana Jahindra

FACEOFF

DApps are a lost cause:

The Capitol riots have focused the world's attention on the misuse and abuse of social media platforms such as Twitter and Facebook, decentralized social media networks are being suggested as a potential solution - but would they really be such a good thing?

Well, after a massive Twitter hack in July 2020, there were renewed calls for decentralized social media solutions that could not be compromised in the same way. The fact is, though, that there are already a dozen or more decentralized social media platforms built on the blockchain. Some are abandoned projects, some show strong potential, however, to date, all have struggled to gain and maintain a significant user base. And if a decentralized Facebook or a peer to peer Twitter was actually able to attract a mass user base, why has it been a nightmare so far?

Steemit has almost 1.2 million registered users with around half a million active users that discuss a wide range of topics. The bear market of 2018 have not been kind to the project, as a range of issues have seen user interest decline. And what would be the future of decentralized social media while it's declining user interests?

With these conspiracies, Decentralized social media would not last long until it satisfies the freedom of speech of its users even when they're against a political system in the real world. Considering blockchain has been around for over a decade now, why haven't any of these big four platforms explored it thus far?

FACEOFF

The flip side of control is the ***burden of responsibility.*** *There's* ***no service that can help recover a lost or stolen password.*** *Moderation relies on bottom-up methods that* ***have not been tested at scale,*** *which leaves these networks* ***vulnerable to the same kinds of abuse found on centralized sites.*** *The P2p networks do not have global "like" or "share" counts, and some do not allow users to edit or delete posts. This behavior can be surprising and illustrates how features and performance users have come to take for granted can be challenging to replicate in a p2p network.*
We can't predict their success, especially with the uncertainty surrounding them — ownership-accountability model, user adoption rate, and competition with big tech. ***Decentralized web advocates have good intentions, but there's no silver-bullet technical solution for the challenges that lie ahead.***

--Shalini

OPINION

*Can we fix Climate Change? NO**

NEVER BEFORE IN HUMAN HISTORY HAVE WE BEEN RICHER, MORE ADVANCED, OR POWERFUL. AND YET WE FEEL OVERWHELMED IN THE FACE OF RAPID CLIMATE CHANGE.

CLIMATE CHANGE IS PRETTY SIMPLE TO UNDERSTAND, GREENHOUSE GASES TRAP ENERGY FROM THE SUN AND TRANSFER IT TO OUR ATMOSPHERE. THIS LEADS TO WARMER WINTERS AND HARSHER SUMMERS. DRY PLACES BECOME DRIER AND WET PLACES WETTER. COUNTLESS PEOPLE WILL DIE, AS THE RISING OCEAN SWALLOWS THE CITIES WE BUILT ON THEM.

SO WHY DON'T WE JUST STOP IT? WHY DON'T WE STOP CLIMATE CHANGE?? IT'S A LITTLE MORE COMPLICATED THAN THAT.....

The public notion of Climate Change often revolves around a few main things, running cars, burning coal, and burping cows. Replace them with biking to work, rows of solar panels, and something something organic. In simple words, whatever we have done for the past 150 years to make our lives cleaner, safer, luxurious, and comfortable is making things worse for the biosphere.

When it comes to talking about what are the major pollutants and contributors to climate change only a few come to our heads. Beef, cars, energy, planes. But many major polluters are barely even talked about.

- **The emissions leaking out from landfills are as significant as the emissions of all the jets in the air.**
- **1.5x times more Carbon Dioxide is produced from heating our homes than all the vehicles in the world combined.**
- **The emissions produced when making a new car is equivalent to building just 2 meters of road.**

OPINION

Fixing just one part of the industrial system is not enough, each of them needs its own solution and many of them aren't straightforward.

Around 2100, our population would become steady at around **10 Billion people** and we don't know how to feed them all without emitting greenhouse gases. It's almost impossible to get zero-emission food. **Rice alone emits so much methane every year that it practically equals the emissions of all air traffic in the world.**

One of the most effective and sinister pieces of propaganda was the **'Personal Carbon Footprint'** campaign popularized by **BP in 2005**. Which still seriously distracts all of us from the actual scale of the problem. **To put it into perspective, if you eliminated 100% of your emission from the rest of your life, you would save 1 seconds' worth of emissions from the global energy sector.** Even the most motivated person can't even make a tiny dent.

So what can we do?

Vote at the ballot, vote with your wallet. There are too many interests and complicated grey zones. In the end to truly get the systematic changes we want, **everybody will be a little unhappy and that is ok.** This is the best we can do. Deal with reality and promote your priorities through your behaviour and actions.

And while you do so, you can eat less meat, use public transport, buy an electric car, travel less. **Not because you should feel guilty if you don't or you naively believe that you alone can stop climate change -but to do your tiny tiny part for the systemic change we need.**

A ARUN JOSEPHRAJ
1BY19AI001
5TH SEM, AIML

NLP

GPT-3. An NLP

Generative Pre-trained Transformer 3 (GPT-3) is an autoregressive language model that uses deep learning to produce human-like text.
It is the third-generation language prediction model in the GPT-n series created by **OpenAI**, a San Francisco-based artificial intelligence research laboratory. GPT-3's full version has a capacity of **175 billion machine learning parameters**. GPT-3 is part of a trend in natural language processing (NLP) systems of pre-trained language representations.

The quality of the text generated by GPT-3 is so high that it can be difficult to determine whether or not it was written by a human, which has both benefits and risks. Thirty-one OpenAI researchers and engineers presented the original May 28, 2020 paper introducing GPT-3. In their paper, they warned of GPT-3's potential dangers and called for research to mitigate risk. David Chalmers, an Australian philosopher, described GPT-3 as "**one of the most interesting and important AI systems ever produced**."

NLP

GPT-3. An NLP Capabilities

The team increased the capacity of GPT-3 by over two orders of magnitude from that of its predecessor, making GPT-3 the **largest non-sparse language model** to date. It's higher level of accuracy is attributed to its increased capacity and higher number of parameters. GPT-3's capacity is ten times larger than that of Microsoft's Turing NLG, the next largest NLP.

Sixty percent of the weighted pre-training dataset for GPT-3 comes from a filtered version of Common Crawl consisting of **410 billion byte-pair-encoded tokens**. Other sources are 19 billion tokens from WebText2 representing 22% of the weighted total, 12 billion tokens from Books1 representing 8%, 55 billion tokens from Books2 representing 8%, and 3 billion tokens from Wikipedia representing 3%.

GPT-3 was trained on hundreds of billions of words and is **capable of coding in CSS, JSX, Python**, among others. Since GPT-3's training data was all-encompassing, it does not require further training for distinct language tasks.

In an initial experiment 80 US subjects were asked to judge if short ~200 word articles were written by humans or GPT-3. The participants judged incorrectly 48% of the time, doing only slightly better than random guessing.

NLP

GPT-3. An NLP

Problems with GPT-3

GPT-3's ability to produce language has been hailed as the best that has yet been seen in AI; however, there are some important considerations.

- The CEO of OpenAI himself, Sam Altman, has said, "The GPT-3 Hype is too much. AI is going to change the world, but GPT-3 is just an early glimpse."

- Firstly, it is a hugely expensive tool to use right now, due to the huge amount of compute power needed to carry out its function. This means the cost of using it would be beyond the budget of smaller organizations.

- Secondly, it is a closed or black-box system. OpenAI has not revealed the full details of how its algorithms work, so anyone relying on it to answer questions or create products useful to them would not, as things stand, be entirely sure how they had been created..

- Thirdly, the output of the system is still not perfect. While it can handle tasks such as creating short texts or basic applications, its output becomes less useful (in fact, described as "gibberish") when it is asked to produce something longer or more complex.

Base series	A set of GPT-3 models that can understand and generate natural language
Instruct series `Beta`	A set of specialized models that are similar to the base series, but better at following instructions
Codex series `Private beta`	A set of models that can understand and generate code, including translating natural language to code
Content filter	A fine-tuned model that can detect whether text may be sensitive or unsafe

-- **Shashank Ramesh**
3rd semester
AI&ML

FACULTY ACHIEVEMENTS

Dr. Bharathi Malakareddy A

- DR. Bharathi M A, Professor & HoD, AI&ML, was a resource person for Machine learning in Healthcare Domain , Reva University on 10.05.2021.
- Dr Bharathi Malakreddy A, Professor and Head, Department of AI & ML, was a BoS member for CIT, Reva University in June 2021.
- Dr Bharathi Malakreddy, Dr Santhi Natarajan and Anand Ravishankar presented a paper, “Sylvian-Silva (SFORCE): An Ensembled Boost Approach Towards Machine Learning”, for the conference IEEE CONECCT 2020, on 02.07.2020.
- DR. Bharathi M A, Professor & HoD, AI&ML, has Published paper on "ECC based multi factor authentication and key generation systems for IoT Healthcare", in Turkish Journal of Computer and Mathematics Education

Dr. Anupama H.S

- Dr Anupama H S, Associate Professor, Department of AI & ML, has presented and published a paper at the IEEE sponsored International Conference on Artificial Intelligence and Smart systems (ICAIS 2021) organised by JCT college of Engineering and Technology, Coimbatore, India on 26.03.2021.
- Dr Anupama H S, “Creation of Open Educational Resource (OER) Activity: Flipping the Classroom with Moodle”, Journal of Seybold Report (UGC Approved Journal), ISSN NO: 1533-9211, Volume 15, Issue 7, Page no: 965-979.
- Dr Anupama H S, Associate Professor, Department of AI & ML, has attended FDP On Artificial Intelligence and its applications in September 2021.

FACULTY ACHIEVEMENTS

Dr. Vishwa Kiran S

- Dr Vishwa Kiran S, Associate Professor, Department of AI & ML, was a resource person for “Getting Started with Raspberry Pi for IoT Projects”, an AICTE Sponsored short term training program organized by KCG College of Technology, Chennai on 18.03.2021
- Dr Vishwa Kiran S, Associate Professor, Department of AI & ML, was a resource person for the corporate training, “Linux Fundamentals for Cisco Employees”, held on 30.09.2021

Dr. Rakesh N

- Dr Rakesh N, Associate Professor, Department of AI & ML, has extended his support in guiding as a subject expert for three Ph.D. scholars at Amrita Vishwavidyapeetham (University), Bengaluru Campus in June 2021.
- Dr Rakesh N, Associate Professor, Department of AI & ML, has been appointed Co-Thesis Advisor for a couple of Research Scholars in Dept. of Computer Science and Engineering at Amrita University, Bengaluru Campus.
- Dr Rakesh N, Associate Professor, Department of AI & ML, was selected as an External subject for 5 Research scholars in Dept. of Computer Science and Engineering at Amrita University, Bengaluru Campus.
- Dr Rakesh N, Associate Professor, Department of AI & ML, was selected as an external examiner to evaluate the Ph. D thesis entitled “CLOUD COMPUTING ANOMALY INTRUSION DETECTION SYSTEM TO DETECT DDOS ATTACK IN PRIVATE CLOUD ENVIRONMENT ". Vels University, Vels Institute of Science, Technology & Advanced Studies (VISTAS), -Chennai-600 117
- Dr Rakesh N, Associate Professor, Department of AI & ML, was invited as External examiner for two M. Tech project evaluations at PES University, South Campus.

FACULTY ACHIEVEMENTS

Dr. Rakesh N

- Dr Rakesh N, Associate Professor, Department of AI & ML, reviewed three technical research papers for the 2021 International Conference on Radar, Antenna, Microwave, Electronics and Telecommunications (ICRAMET) (to be held virtually on November 23th - 24th, 2021.) Research Center for Electronics and Telecommunications (PPET), Indonesian Institute of Sciences (LIPI).
- Dr Rakesh N, Associate Professor, Department of AI & ML, was invited to serve as “Technical Program Committee Member” for 2021 2nd International Conference on Information Technology, Advanced Mechanical and Electrical Engineering (ICITAMEE) Universitas Muhammadiyah Yogyakarta (UMY), Yogyakarta, Indonesia, August 25-26th 2021.
- Dr Rakesh N, Associate Professor, Department of AI & ML, attended webinar talk on “Blockchain Fundamentals” – Use cases and Application by Dept. of Computer Science & Engineering, Amrita School of Engineering, Bengaluru on 15th May 2021.
- Dr Rakesh N, Associate Professor, Department of AI & ML, initiated the discussion with Subex Company Ltd., to set up “IoT & Cybersecurity”, Centre of Excellence laboratory at Dept. of AI & ML, BMSIT & M, Bengaluru
- Dr Rakesh N, Associate Professor, Department of AI & ML, organized webinar talks by Huawei Technology, India in association with Dept. of AI & ML, BMSIT & M, Bengaluru on 24th May 2021 at 4.00 pm to 6.00 pm.

FACULTY ACHIEVEMENTS

Dr. Rakesh N

- Dr Rakesh N, Associate Professor, Department of AI & ML, coordinated the five-day FDP program on “Demystifying Machine Learning Concepts” from 17th May 2021 to 21st May 2021 at Dept. of AI & ML, BMSIT & M in association with Impavid Technologies, Bengaluru.
- Dr Rakesh N, Associate Professor, Department of AI & ML, organized Brianium expert talk on “Cryptocurrency & its bridge with Artificial Intelligence” on 22nd May 2021 at 2.00 p.m.
- Dr Rakesh N, Associate Professor, Department of AI & ML, organized Brianium expert talk on “Building AI products” on 19th June 2021 at 3.00 pm.
- Dr Rakesh N, Associate Professor, Department of AI & ML, organized Brianium expert talk on “Ethics in AI” on 10th July 2021 at 3.00 p.m.
- Dr Rakesh N, Associate Professor, Department of AI & ML, invited as External expert for six monthly review of Ph.D work of a Research scholar at M.S. Ramaiah Institute of Technology, Bengaluru.
- Dr Rakesh N, Associate Professor, Department of AI & ML, reviewed three technical research papers for Fourth International Conference on Microelectronics Signals and Systems (ICMSS 21), T K M College of Engineering, Kerala, 18 – 19th November 2021.
- Participated in the Paper Publishing by Dr. Dhanukumar P, Sr. IEEE Client Service held on Sept. 17, 2021 organized by the NDLI Club of BMS Institute of Technology & Management NDLI Club.
- Participated in the Global Event on Understanding Copyright and its Implications in our Daily Lives held on Oct. 7, 2021 organized by the NDLI Club of BMS Institute of Technology & Management NDLI Club.

STUDENT ACHIEVEMENTS

1. Nidhi - 3rd Sem AI & ML

Won first place in National level quiz on Aviation conducted by IIT-Bombay

AI IN SURVEILLANCE

We are currently in a technology revolution and tech is accelerating, rocketing and spiraling in all sorts of directions. No one wants it to stop. The better the tech, more exciting goods to buy, more efficient economy, better healthcare and more effective military but at the same time our lives start to become digital and along with that our hobbies turn digital, our relationships and our crimes turn digital. Companies and governments will try to regulate in a way not witnessed before and it's not far when governments will force the companies under their jurisdiction to actively police its users, not only to look out for crimes but also human behavior that they don't approve of or view as a potential threat to the company or government. There might be a future where companies or governments could arrest you for searching a topic out of curiosity that may list you as a risk factor to them or society. Sounds extreme right? This is already occurring in some countries. The point being that such a form of surveillance is being carried out with the help of nothing but AI.

When it comes to surveillance, AI is at the heart of everything. There are millions of cameras everywhere and relatively few people to monitor the movements constantly. Instead, they are processed by ever-learning AI algorithms. It can analyze each frame and provide real-time insight. The pandemic has created unprecedented opportunities for data collecting and tracking. Mountains of data are used to teach AI systems to identify trends, make choices, and maximize revenues. Much of the data collected from customers is done so, without their knowledge. Internet firms monitor every activity to determine our preferences for products, news articles, or advertisements.

AI IN SURVEILLANCE

The key issue is that AI is not only driven by monitoring. It is now being used in its service. Few nations have begun to use AI to create a digital social control system patrolled by precog algorithms that discover dissenters in real time. Indeed, AI is assisting in the saving of lives all over the world, but instead of being the primary emphasis, it is increasingly being used to police people on many incorrect levels, infringing on human rights. As many of these AI technologies employed in the surveillance system now are still in their early or middle stages. Few of them also require periodic regulation. **One of the most common misconceptions regarding artificial intelligence is that it is a neutral or objective technology**. **That is not the case. It is molded by the preconceptions, priorities, and judgments of those who create it as well as those who use it.** Similar algorithms are being created for so-called biometric recognition, which identifies people based on how they look, sound, or move, as well as other characteristics such as outward appearance and the use of such a technology is likely not founded on valid research.

As a result, AI is also transforming the military industry. AI-powered video monitoring software **reduces the amount of time invested on surveillance**, allowing security officers to be more productive and successful at their duties. By eliminating the need to continuously watch video displays and automating the "detection" job of surveillance: confirming and responding on critical occurrences, AI technology allows operators to focus on what they do best. .

The need of the hour is to **govern the AI technologies** that are now in use, because the majority of them have no restrictions or rules. Furthermore, AI technologies are influenced by the preconceptions, goals, and judgments of their inventors or the corporations that use them. It's just a matter of time before the laws for such sensitive technologies are put in place and they'll be easy to use while respecting the bounds of human privacy.

WILL AI REPLACE YOUR JOB?

"Artificial intelligence is poised to eliminate millions of current jobs and create millions of new ones, some of which haven't been invented yet".

- Mike Thomas

Artificial intelligence has the ability to assist humans and handle some of the most pressing issues that they confront. Technology is being used by humans to make our lives simpler. Technological improvements, which have been launched in recent years, offer both advantages and disadvantages. Machines that comprehend the world and respond constructively appear to be on the horizon. Many occupations, such as salesmen and car production employees, have been displaced by artificial intelligence. The government may be able to better help residents, protect those who are vulnerable, and save time and money. As artificial intelligence improves education, teachers may be able to help every kid live a safe and fulfilling life. These are only a few of the potential advantages if the technology is developed with both the advantages and the risks and obstacles in mind.

The alleged threat of AI taking away human jobs:

AI will not rob us of our jobs. Yes, it will displace certain occupations, but it is more likely to alter what human employees do. The widespread fear of AI displacing millions of human jobs is unfounded. Some experts believe AI will produce a slew of new professions, many of which we have no idea about yet.

Jobs will move and adapt rather than perish. AI will improve how individuals perform their tasks by extracting and evaluating data to help in real-time decision making.

WILL AI REPLACE YOUR JOB?

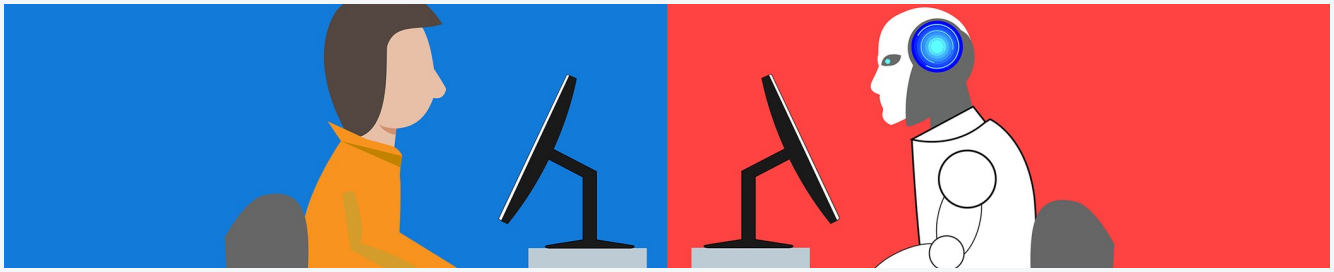
With AI automating repetitive and monotonous tasks—from accounting to the assembly line—the human workforce's skill set must change. The ordinary employee's concentration and responsibilities will broaden and deepen. We must consider teaching our present and future workers in the talents that robots cannot copy:

- **Cognitive skills:** AI is less successful when it must make a decision based on data for which it has not been educated. People frequently make decisions in situations they have never experienced before. Human employees will need skills such as sophisticated problem solving, thinking, negotiation, and decision making.

- **Emotional skills:** AI technology is still a long way from replicating empathy, flexibility, and other emotional qualities. Consider this in terms of health care. While AI is providing information to doctors and nurses to assist them in making choices and accomplish various jobs, the human touch and

- **Creative skills:** While AI can help people write songs and produce music, it will never be able to perfectly mimic a human's ability to create, invent, and inspire. Entrepreneurship and initiative-taking will rise by 33% in the United States, whereas it will increase by 32% in Europe.

- **Social skills:** Machines aren't very good at human interactions, becoming leaders, or engaging in brainstorming sessions. AI will also struggle with multicultural sensitivity, which is essential for effective employees in multinational corporations.



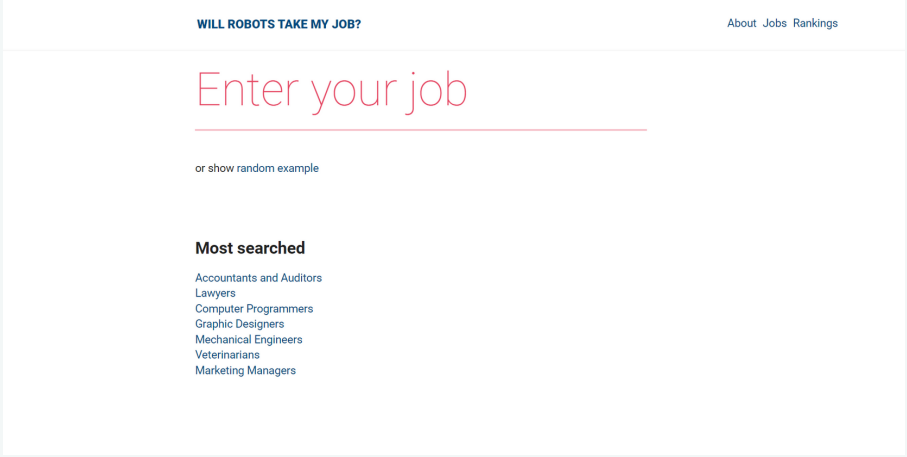
WILL AI REPLACE YOUR JOB?

How many jobs will AI replace?

- According to the World Economic Forum's report titled "THE FUTURE OF EMPLOYMENT RESEARCH", AI is expected to replace 85 million jobs globally by 2025, but it will also generate 97 million new employment opportunities within the same time period.

- According to research, the rate at which AI will replace vocations will only increase, hurting both the highly educated and the uneducated. According to a recent Becker's Hospital Review article, AI will also take over certain healthcare occupations related to revenue cycle management. There are several ideas on the nature of the change. You'll be glad to know that many of them aren't gloomy or doom-laden.

- Carl Benedikt Frey and Michael A. Osborne published "The Future of Employment: How Susceptible Are Jobs to Computerization?" in 2013. The authors investigate how vulnerable jobs are to computerization by using a Gaussian process classifier to predict the likelihood of computerisation for 702 specified occupations. You may find out if your employment is vulnerable to AI by visiting https://willrobotstakemyjob.com/.



-- **Mirza Fardeen Baig**
5th semester
AI&ML

-- **N Sahana**
3rd semester
AI&ML

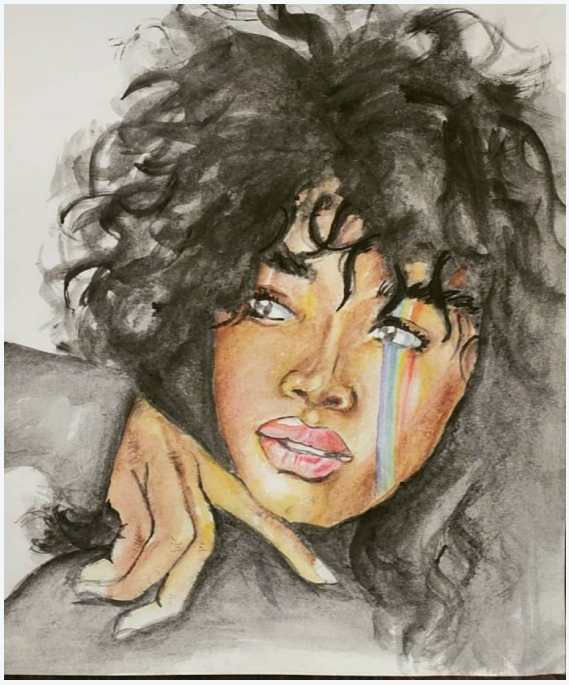
STUDENT SUBMISSION

I am just curious as to why ; why they are immune,
I asked for it? No, that's something I'll refute,
I wonder whether I will lose my sight,
Wont I get to feel it? It's always averted my plight,
Bees dont sting ; they pity me,
Stars shed their flickering glitter on me,
But only me is infested with this,
Wish this thing was being blue ; Oh! I wish,
Is life worth living after all?
When you are no better ; could hardly crawl,
Is the sight worth looking after all?
When there's no spring but just fall,
I need a light to sail across the sea,
But not everyone needs one ; I see,
Is life worth living after all?
When you have no reason but still you stroll?
I am sick but not from outside,
It's like sun at night ; when it's on the other side.
I play a puppet ; with strings attached,
My heart's woven and slightly patched,
I had no part when I was given my role,
So who am I to tie myself on the pole?
Is life worth living after all?
When you cant jump across that wall?

IF YOU WILL STUMBLE,
THEN I WILL FALL WITH YOU,
IF YOUR HEART CRUMBLES,
I WILL BE THERE WITH YOU

--NIDHI, 2nd Semester

STUDENT SUBMISSION



I THINK, I OVER-THINK

Soaked into the darkness of the silent night,
Endless Battles of infinite thoughts, in my head, I fight.
My eyes are wide open, I forget to blink,
It's because I think, I over think.
My pillow, my only best friend,
Soaks in all that's in my head, having no end. My punches, my tears, it swallows up everything like a sink, And it's because I think, I overthink.
In the dark hours, My fears have surfaced to the top, Reminded of My insecurities, forgotten of battles I fought, Reality checks , delusional dreams ,I turn sides ,I cuddle and shrink. And I think, I overthink.
The night is weird, powerful and yet surprising. I think of fishes flying and butterflies swimming. happy, sad, frightening and also the impossible, I think, because I think, I over think.
In my head, I'm a minister, a warrior, a loser, a winner And for it all, is the night a sinner?
For some are high on Thoughts after a drink, But I, at night I think I over think.
I always thought over thinking is a bane, But no, it's not all bad, not all pain.
I have dreamt beyond limits and it's not all in vain. I mustn't forget, my best ideas are borrowed from that deep end. Night is the time when the thoughts of our soul descend.
I now realize, I now rethink.
I think, I over think.

--Kaushik, 2nd semester

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SOCIAL HANDLES

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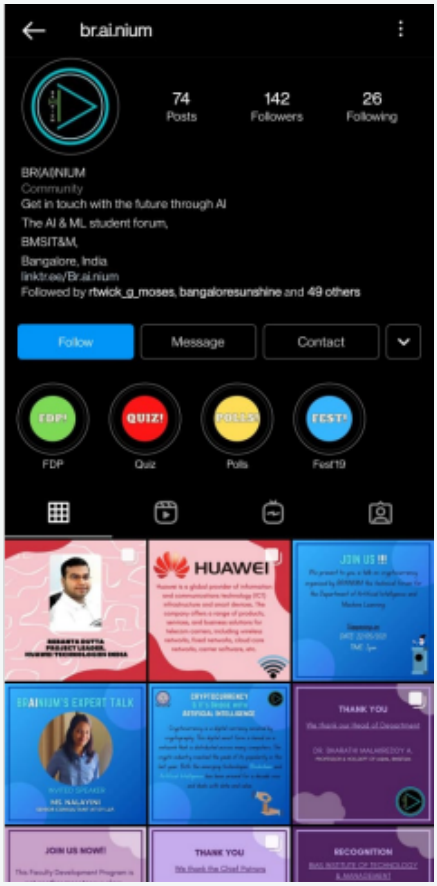
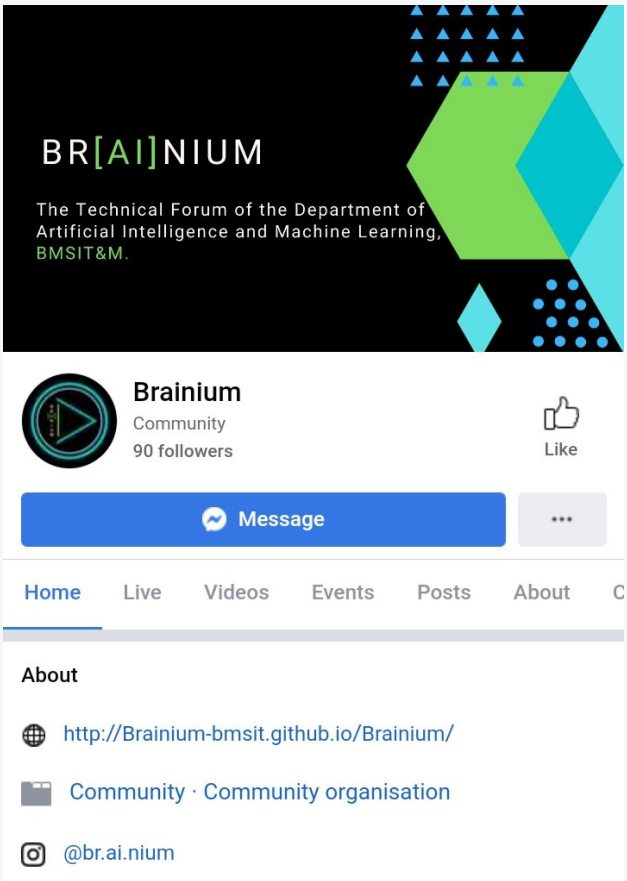
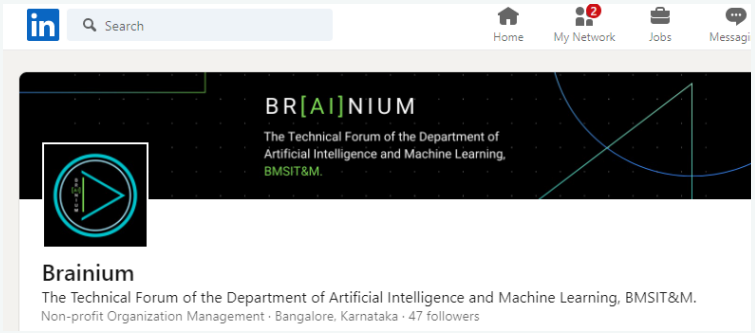


@brAIniumTheAICommunity



Brainium



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Calender of Events (CoE) of B.E. V & VII SEMESTER 2021-22 (ODD)

VISION OF THE INSTITUTE	To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.
MISSION OF THE INSTITUTE	Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

Month	Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Working Days	EVENTS		
OCTOBER	W-1						1	2	1	01-Oct.: Commencement of V and VII Semester Classes	02-Oct.: Gandhi Jayanthi	
	W-1	3	4	5	6	7	8	9	5	06-Oct.: Mahalaya Amavasya		
	W-2	10	11	12	13	14	15	16	4	14-Oct.:Mahanavami, Ayudhapooja	15-Oct.: Vijayadashami	
	W-3	17	18	19	20	21	22	23	5	20-Oct.:Maharishi Valmiki Jayanti, Eid-Milad	21-Oct.: FIMS Data Entry	
	W-4	24	25	26	27	28	29	30	6	25-Oct.: FYP/PBL: Group Formation, Problem Identification, Guide Allocation	29-Oct.: TechTransform - 2021 Notification	
	W-5	31										
NOVEMBER	W-5		1	2	3	4	5	6	3	01-Nov.: Kannada Rajyothsava	03-Nov.: Naraka Chaturdashi	05-Nov.:Balipadyami Deepavalli
	W-6	7	8	9	10	11	12	13	6	8-Nov.: FYP/PBL: Synopsis Submission and Problem Evaluation (PR-1)		
	W-7	14	15	16	17	18	19	20	6	20-Nov.: FIMS Data Entry		
	W-8	21	22	23	24	25	26	27	5	22-Nov.: Kanakadasa Jayanti	23-25 Nov.:Internal Assessment - 1	
	W-9	28	29	30					2	30-Nov.: FYP/PBL: Phase- 1 Second Mid-term Project Evaluation (PR-2)		
DECEMBER	W-9				1	2	3	4	4	02-Dec.: IA - 2 Marks and Attendance Status Dispatch through SMS	4-Dec.: Parents Teachers Association - 1	4-Dec.: TechTransform - 2021
	W-10	5	6	7	8	9	10	11	6	06-Dec.: Student Feedback - 1		
	W-11	12	13	14	15	16	17	18	6	18-Dec.: FIMS Data Entry		
	W-12	19	20	21	22	23	24	25	5	20-22 Dec.:Internal Assessment - 2	25-Dec.: Christmas	25-Dec.: IA - 2 Marks and Attendance Status Dispatch through SMS
	W-13	26	27	28	29	30	31		5	29-Dec.: IA - 2 Marks and Attendance Status Dispatch through SMS		
JANUARY	W-14							1	1			
	W-14	2	3	4	5	6	7	8	6	06-Jan.: Student Feedback - 2	8-Jan.: FYP/PBL: Phase- 1 Second Mid-term Project Evaluation (PR-3): BMSIT-OPEN DAY	
	W-15	9	10	11	12	13	14	15	5	14-Jan.: Makara Sankranthi		
	W-16	16	17	18	19	20	21	22	6	20-22 Jan.:Internal Assessment - 3	20-Jan.: FIMS Data Entry	
	W-17	23	24	25	26	27	28	29	5	26-Jan.: Republic Day Celebration	29-Jan.: IA - 3 Marks and Attendance Status Dispatch through SMS	
	W-17	30	31							31-Jan.: Last Working Day of V and VII Semester		
	Total Number of Working Days								92			

CONTINUOUS INTERNAL EVALUATION			
COURSE	SEM	START	END
INTERNAL ASSESSMENT TEST - I			
B.E	V & VII	23-11-2021	25-11-2021
INTERNAL ASSESSMENT TEST - II			
B.E	V & VII	20-12-2021	22-12-2021
INTERNAL ASSESSMENT TEST - III			
B.E	V & VII	20-01-2022	22-01-2022

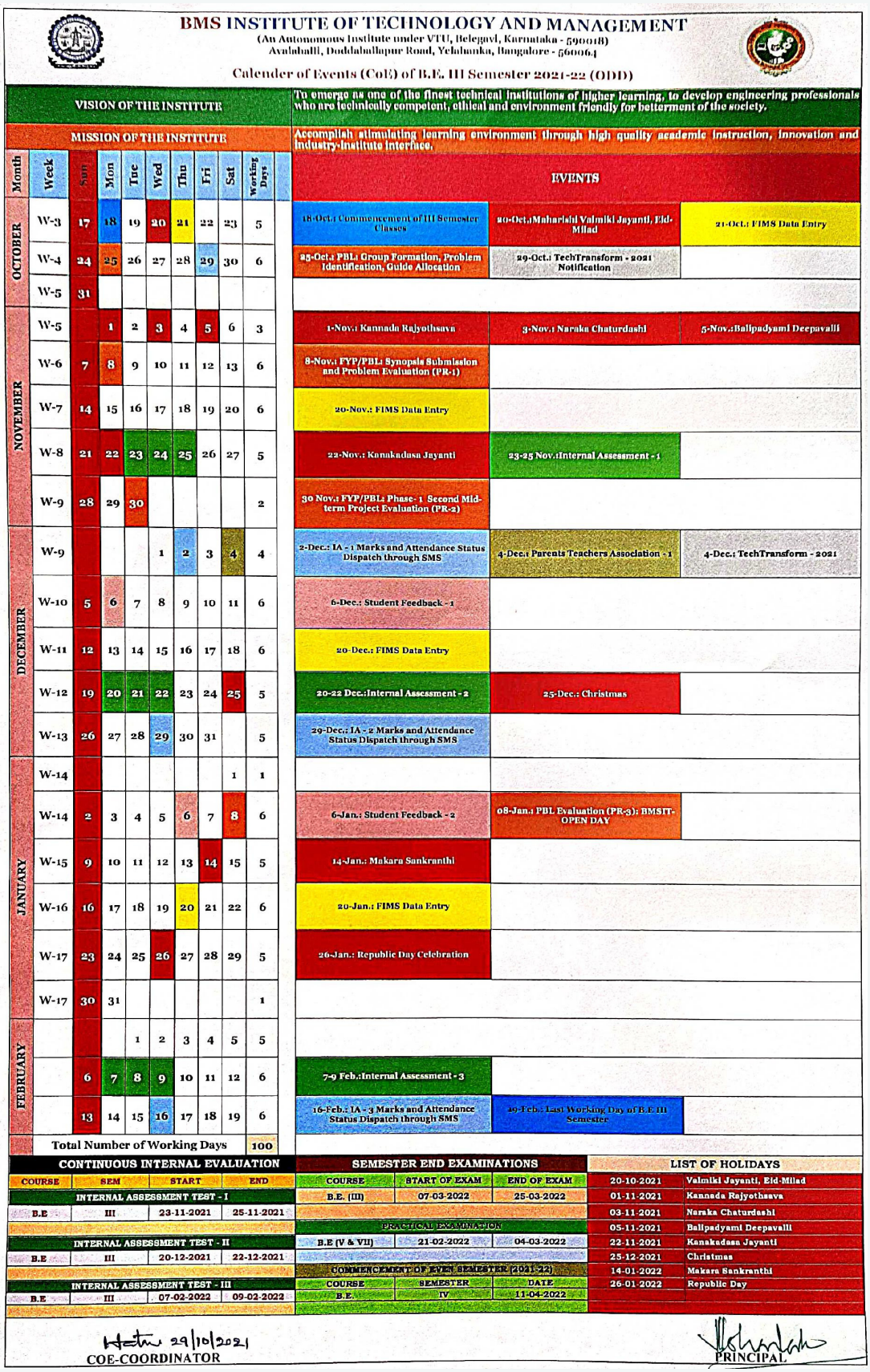
SEMESTER END EXAMINATIONS		
COURSE	START OF EXAM	END OF EXAM
B.E. (V & VII)	11-02-2022	25-03-2022
PRACTICAL EXAMINATION		
B.E (V & VII)	01-02-2022	10-02-2022
COMMENCEMENT OF EVEN SEMESTER (2021-22)		
COURSE	SEMESTER	DATE
B.E.	VI & VIII	04-04-2022
PTA	PTA-1	
DATE	04-12-2021	

LIST OF HOLIDAYS	
02-10-2021	Gandhi Jayanthi
06-10-2021	Mahalaya Amavasya
14-10-2021	Mahanavami, Ayudhapooja
15-10-2021	Vijayadashami
20-10-2021	Valmiki Jayanti, Eid-Milad
01-11-2021	Kannada Rajyothsava
03-11-2021	Naraka Chaturdashi
05-11-2021	Balipadyami Deepavalli
22-11-2021	Kanakadasa Jayanti
25-12-2021	Christmas
14-01-2022	Makara Sankranthi
26-01-2022	Republic Day

29/10/2021
COE-COORDINATOR

PRINCIPAL

COE



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Calender of Events (CoE) of B.E. III Semester 2021-22 (ODD)

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Month	Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Working Days	EVENTS		
OCTOBER	W-3	17	18	19	20	21	22	23	5	18-Oct.: Commencement of III Semester Classes	20-Oct.:Maharishi Valmiki Jayanti, Eid-Milad	21-Oct.: FIMS Data Entry
	W-4	24	25	26	27	28	29	30	6	25-Oct.: PBL: Group Formation, Problem Identification, Guide Allocation	29-Oct.: TechTransform - 2021 Notification	
	W-5	31										
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	W-6	7	8	9	10	11	12	13	6	8-Nov.: FYP/PBL: Synopsis Submission and Problem Evaluation (PR-1)		
	W-7	14	15	16	17	18	19	20	6	20-Nov.: FIMS Data Entry		
	W-8	21	22	23	24	25	26	27	5	22-Nov.: Kanakadasa Jayanti	23-25 Nov.:Internal Assessment - 1	
	W-9	28	29	30					2	30 Nov.: FYP/PBL: Phase- 1 Second Mid-term Project Evaluation (PR-2)		
DECEMBER	W-9				1	2	3	4	4	2-Dec.: IA - 1 Marks and Attendance Status Dispatch through SMS	4-Dec.: Parents Teachers Association - 1	4-Dec.: TechTransform - 2021
	W-10	5	6	7	8	9	10	11	6	6-Dec.: Student Feedback - 1		
	W-11	12	13	14	15	16	17	18	6	20-Dec.: FIMS Data Entry		
	W-12	19	20	21	22	23	24	25	5	20-22 Dec.:Internal Assessment - 2	25-Dec.: Christmas	
	W-13	26	27	28	29	30	31		5	29-Dec.: IA - 2 Marks and Attendance Status Dispatch through SMS		
JANUARY	W-14							1	1			
	W-14	2	3	4	5	6	7	8	6	6-Jan.: Student Feedback - 2	08-Jan.: PBL Evaluation (PR-3): BMSIT-OPEN DAY	
	W-15	9	10	11	12	13	14	15	5	14-Jan.: Makara Sankranthi		
	W-16	16	17	18	19	20	21	22	6	20-Jan.: FIMS Data Entry		
	W-17	23	24	25	26	27	28	29	5	26-Jan.: Republic Day Celebration		
	W-17	30	31						1			
FEBRUARY				1	2	3	4	5	5			
		6	7	8	9	10	11	12	6	7-9 Feb.:Internal Assessment - 3		
		13	14	15	16	17	18	19	6	16-Feb.: IA - 3 Marks and Attendance Status Dispatch through SMS	19-Feb.: Last Working Day of B.E III Semester	
	Total Number of Working Days								100			

CONTINUOUS INTERNAL EVALUATION

COURSE	SEM	START	END
INTERNAL ASSESSMENT TEST - I			
B.E	III	23-11-2021	25-11-2021
INTERNAL ASSESSMENT TEST - II			
B.E	III	20-12-2021	22-12-2021
INTERNAL ASSESSMENT TEST - III			
B.E	III	07-02-2022	09-02-2022

SEMESTER END EXAMINATIONS

COURSE	START OF EXAM	END OF EXAM
B.E. (III)	07-03-2022	25-03-2022
PRACTICAL EXAMINATION		
B.E (V & VII)	21-02-2022	04-03-2022
COMMENCEMENT OF EVEN SEMESTER (2021-22)		
COURSE	SEMESTER	DATE
B.E.	IV	11-04-2022

LIST OF HOLIDAYS

20-10-2021	Valmiki Jayanti, Eid-Milad
01-11-2021	Kannada Rajyothsava
03-11-2021	Naraka Chaturdashi
05-11-2021	Balipadyami Deepavalli
22-11-2021	Kanakadasa Jayanti
25-12-2021	Christmas
14-01-2022	Makara Sankranthi
26-01-2022	Republic Day

29/10/2021
COE-COORDINATOR

PRINCIPAL

DEPARTMENT MEMORIES

SIGN OFF

We offer our solemn gratitude to the department of AI&ML to have showered us with an opportunity to express our thoughts through this magazine, and our most respected Hod, Mrs. Bharathi who has been supportive throughout. We'd not be able to thank our dear readers enough, for they have been the biggest driving factor for us to improve with every successive volume that's released and we hope we can continue to serve the best of your interests on the coming future.

THANK YOU