



### TECHWARTS

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Techwarts is an umbrella organization which houses clubs from four different domains, and is one of the most happening Tech Communities in PESU, EC Campus.

Throwing light on various domains that include Competitive coding, ML and AI, AR/VR and Cyber Security, this community is your go-to platform for having a hands on experience with like minded peers.

## Why this newsletter? 66 Our community is growing! And we would like to include as many of you in this journey as we can! Our motto is to build communities and

you in this journey as we can! Our motto is to build communities and to inculcate a 'Tech culture' in those around us. We feel that a small newsletter with updates and insights from the world of technology would definitely help us do so, and we aim to do these monthly. So, hold on as you read through our first ever issue of the Techwarts newletter!

This newsletter currently has 2 extraordinarily written parts. The first being two zippy, topical and informative articles on **WhatsApp and SpaceX**, followed by the second, an in-depth talk about **AI's tryst with Bollywood**, which walks you through the world of Artificial Intelligence spiced up with hilarious Bollywood references. We hope that these accompany you in your leisure time when you hope to be updated on current tech affairs or maybe want to have a laugh while learning something new :)

Note: We would like to invite you to send in any blogs/articles you have related to any tech-domains! This is an open space for any budding bloggers or students who wish to share their work with the rest of the community. Please write to us at

#### techwarts@pes.edu

Hope you enjoy your read, -Pradish



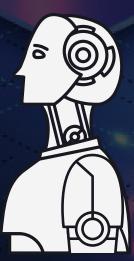
### SPACEX FAILS LANDING FOR THE SECOND TIME



WHATSAPP- ARE YOU USING IT RIGHT NOW?

### IN-DEPTH FEATURE:

### AI'S TRYST WITH BOLLYWOOD



# Spacex fails landing for the second time

Elon Musk. That's the name you want to see on a company. It seems that anything that this man takes on , is just a cake walk for him. His tweets are capable of raising the share prices of any given stock and he's capable of smoking on national television. He can not do any wrong right now , can he? Yet, even with his remarkable attributes he sees failures. And one of them was quite recent.

Through the south Texas cloudiness on Tuesday, SpaceX pulled off a dazzling high elevation practice run of a Starship rocket model. Yet, the vehicle neglected to nail its finish. The around 16story test vehicle, considered Starship sequential No. 9, met similar destiny as its archetype, SN8: It hammered into the arrival cushion, bringing about a disastrous blast. SN9 lifted off a cushion in Boca Chica.



As SN9 fell back to Earth, the rocket reignited its motors trying to rapidly turn itself upstanding. However, it seemed to need enough push from in any event one motor, making the boat shelter its opposite side and hit a solid cushion at a point, detonating its leftover fuel saves. SpaceX affirmed Tuesday night by means of its site that one of the motors neglected to reignite during the arrival endeavor.

*"IT IS BETTER TO FAIL IN ORIGINALITY THAN TO SUCCEED IN IMITATION"* 

THIS IS ONE OF THE MANY VIRTUES THAT A PERSON LIKE HIM BELIEVES IN, AND WE CAN NOT WAIT TO SEE WHAT HE HAS IN STORE FOR US IN THE FUTURE.

- Navan



### Whatsapp- Are you using it right now?

If you use one app today, it is WhatsApp . Such is it's popularity with over a billion downloads on the play store . But, recently, WhatsApp has received quite a lot of backslash , both on and off the internet. The primary reason for this has been because it has updated its privacy terms . The changes have led people to believe with a high degree of affirmation that WhatsApp would now share it's data with Facebook.

But it has now been reported that WhatsApp has decided to delay the implementation of its new terms for a period of three months .

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WhatsApp declared that it will defer by a quarter of a year the execution of another security strategy that has confronted monstrous reaction with a huge number of its clients moving from the stage to rivals like Signal and Telegram. The approach change was initially planned to happen on 8 February, the Facebook claimed organization said.

It has explained that the update doesn't influence information imparting to Facebook concerning individual discussions or other profile data and just tends to business talks in the occasion a client speaks with an organization's client support stage through WhatsApp.



"We've gotten with such countless individuals how much disarray there is

around our new update. There's been a ton of deception causing concern and we need to assist everybody with understanding our standards and current realities," WhatsApp said in an organization blog.

WhatsApp was based on a basic thought: what you share with your loved ones stays between you. This implies we will

consistently secure your own discussions with start to finish encryption, so neither WhatsApp nor Facebook can see these private messages.

It's the reason we don't keep logs of who everybody's' informing or calling.



We additionally can't see your shared area and we don't impart yourcontacts to Facebook," it said further.The organization said it was moving back the date on which individuals will be approached to audit and acknowledge the

terms.

We'll at that point go to individuals continuously to audit the arrangement at their own speed before new business choices are accessible on 15 May," it added.

Some users have found it convincing , while others have not.



# Where do you take the stand?

## AI'S TRYST WITH BOLLYWOOD

When electives were introduced in our college, I was so confused with all the new terms and the fancy subject names that even Christopher Nolan's movies made more sense to me at that point; I then realised it was important to understand some of the recurring questions in my mind to gain a little bit clarity:

What is data mining? Is there a difference between machine learning and data science? How do they connect to each other? Isn't machine learning just artificial intelligence? Firstly we start off with the term – Data science, which is basically an umbrella term used in terms of a quite broad perspective and thus encompasses data analytics, data mining, machine learning, and several other related disciplines Both data mining and machine learning are rooted in data science and generally fall under that umbrella



Data Mining refers to the process of discovering meaningful patterns in large and complex datasets, The end goal of Data Mining is to extract relevant information (and not the "extraction" of raw data itself)

from datasets and usually transform the same into businesssavvy insights for further use. Machine learning is the study of algorithms (basically different techniques/ "recipes" of code) that give computers –

- The ability to "learn" from data
- And then make predictions and decisions based on what they've learnt

\*This is a very general understanding of machine learning, this definition is often tweaked to understand the different kinds of machine learning algorithms and approaches that're present.



Machine Learning (ML) is commonly used alongside AI but they are not the same thing. ML is a subset of AI. ML refers to systems that can "learn by themselves"

So how are data mining and Machine learning related?

Related would be an understatement – data mining and machine learning oftentimes if not always go hand in hand

Once the data is collected, the real challenge lies in making sense of it – the analysis and interpretation part - This is where Data Scientists and Data Analysts come in, they decide which software and tools to use to analyse and interpret large volumes of unstructured data and find recognizable patterns within it

### Speech recognition and Natural Language processing

Aaah yet another dimension of confusion-here we are trying to understand the basic difference between the two while college expects 8 credit projects from these subjects but we've got to start somewhere; The first clear distinction we need to make is whether we're talking about spoken language (speech) or written language, that is, voicebots on Alexa-like systems, or chatbots (text bots) on FB Messenger, web chat. One takes much more time and effort to build than the other.

> I can talk english, I can walk English, I can laugh English..



we get it Mr. Bachchan but can you understand English?

#### Then what is deep learning now?

Deep learning is machine learning on steroids: it uses a technique that gives machines an enhanced ability to find—and amplify—even the smallest patterns.

This technique is called a deep neural network deep because it has many, many layers of simple computational nodes that work together to munch through data and deliver a final result in the form of the prediction.

AI ML DL ASR / NLP

 Mby deep learning

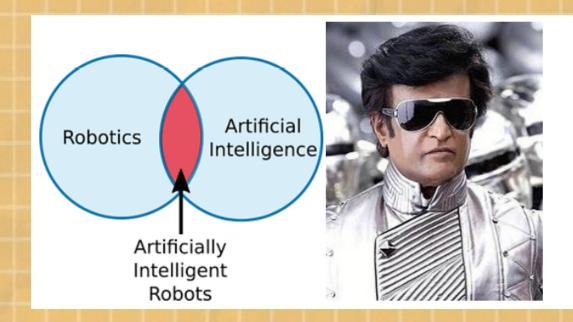
 opposed
 Deep learning

 of deep learning
 Other learning

How do data science techniques scale with amount of data?

#### **Robotics**

Oftentimes the imagery and relation of robots has become synonymous with AI (and in India, Rajnikanth) but that's a stereotype we should be informed about before conforming to it, in particular it's important to understand the distinction between AI, robotics and artificially intelligent robots and Rajnikanth but we're not going to get into the latter.



It is surprisingly difficuly to get experts to agree on exactly what constitutes a "robot." Some people say that a robot must be able to "think" and make decisions. However, there is no standard definition of "robot thinking." Requiring a robot to "think" suggests that it hassome level of artificial intelligence but many non-intelligent robots exist which show that thinking cannot be a requirement for a robot. Artificially intelligent robots are the bridge between robotic and AI. These are robots that are controlled by AI programs. AI algorithms are necessary when you want to allow the robot to perform more complex tasks.

A warehousing robot might use a path-finding algorithm to navigate around the warehouse.

A drone might use autonomous navigation to return home when it is about to run out of battery. A self-driving car might use a combination of AI algorithms to detect and avoid

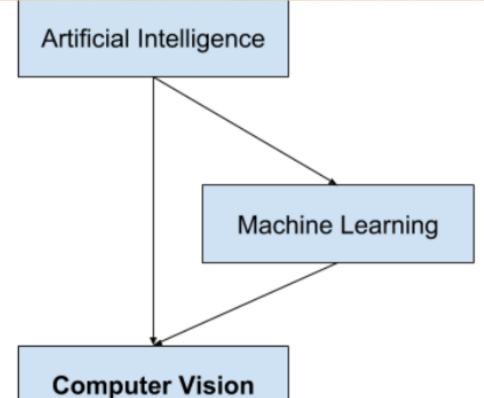
potential hazards on the road. These are all examples of artificially intelligent robots. Even when AI is used to control robots, the AI algorithms are only part of the larger robotic

system, which also includes sensors, actuators, and non-AI programming. The key aspect that differentiates AI from more conventional programming is the word "intelligence."

Non-AI programs simply carry out a defined sequence of instructions. AI programs mimic some level of human intelligence.

### Vision

Computer vision is the field of computer science that focuses on replicating parts of the complexity of the human vision system and enabling computers to identify and process objects in images and videos in the same way that humans do At an abstract level, the goal of computer vision problems is to use the observed image data to infer something about the world.



Thanks to advances in artificial intelligence and innovations in deep learning and neural networks, the field has been able to take great leaps in recent years and has been able to surpass humans in some tasks related to detecting and labelling objects.

### Is Computer Vision and Image Processing The Same Thing?

Computer vision is distinct from image processing. Image processing is the process of creating a new image from an existing image, typically simplifying or enhancing the content in some way. It is a type of digital signal processing and is not concerned with understanding the content of an image. A given computer vision system may require image processing to be applied to raw input, e.g. pre-processing images.



Okay sorry fine I made a non-Bollywood reference.

## **Upcoming events**

### Learning series for WEBSPRINT 13th,14th feb

### ZeroDay CyberSecurity Guest Talk 20th feb

WebSprint 21-23th feb

Tensor 2.0 datathon 6,7th March



# </sub-clubs>



PiXEL, focuses on the exciting possibilities of AR/VR and wants it to be seen not just as the "cool" artsy technology but also one with enormous amounts of real life applications. The aim is to introduce and involve the student developer community to the world of AR/VR with hands-on workshops, informative and interesting updates and even competitions.

Looking for a group of people intrigued by competitive programming? This is the place. We The Programmers is a club dedicated to enhancing your coding and logical thinking skills to prepare you for various programming contests. Right from Data structures to different parameters such as time and space complexity, we cover it all. Who knows, you might one day be the next ICPC champion!



PREDICT THIS!

We at Predict This are looking for enthusiastic members who have some experience in the field of Data Science and Machine Learning, and would like to be part of a community of such enthusiasts, taking on projects, competing in events, sharing new developments and most importantly helping peers learn and grow.

We are are the Cybersecurity club who go by the name, Zero-Day. We focus on various aspects of the Cybersecurity domain, from basic tools all the way upto Penetration Testing. It doesn't matter if you're a beginner who wants to learn or an expert, you'll fit right in.



### </our Team>

- Abhishek Goyal
- Aparna Kalla
- Navan
- Pradish Kapur
- Priyansh Jain
- Rishika
- Sahithya Papireddy
- Sanskriti
- Shrithva
- Swathi



