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Quantum computing takes flight



Quantum computers promise to perform certain tasks much faster than ordinary (classical) computers. In essence, a quantum computer carefully orchestrates quantum effects (superposition, entanglement and interference) to explore a huge computational space and ultimately converge on a solution, or solutions, to a problem. If the numbers of quantum bits (qubits) and operations reach even modest levels, carrying out the same task on a state-of-the-art supercomputer becomes intractable on any reasonable timescale — a regime termed quantum computational supremacy¹. However, reaching this regime requires a robust quantum processor, because each additional imperfect operation incessantly chips away at overall performance. It has therefore been questioned whether a sufficiently large quantum computer could ever be controlled in practice. But now, on page 505, Arute et al.² report quantum supremacy using a 53-qubit processor.

Arute and colleagues chose a task that is related to random-number generation: namely, sampling the output of a pseudo-random quantum circuit. This task

is implemented by a sequence of operational cycles, each of which applies operations called gates to every qubit in an n -qubit processor. These operations include randomly selected single-qubit gates and prescribed two-qubit gates. The output is then determined by measuring each qubit.

The resulting strings of 0s and 1s are not uniformly distributed over all 2^n possibilities. Instead, they have a preferential, circuit-dependent structure — with certain strings being much more likely than others because of quantum entanglement and quantum interference. Repeating the experiment and sampling a sufficiently large number of these solutions results in a distribution of likely outcomes. Simulating this probability distribution on a classical computer using even today's leading algorithms becomes exponentially more challenging as the number of qubits and operational cycles is increased.

In their experiment, Arute et al. used a quantum processor dubbed Sycamore. This processor comprises 53 individually controllable qubits, 86 couplers (links between qubits) that are used to turn nearest-neighbour two qubit interactions on or off, and a scheme to measure all of the qubits simultaneously. In addition, the authors used 277 digital-to-analog converter devices to control the processor.

When all the qubits were operated simultaneously, each single-qubit and two-qubit gate had approximately 99–99.9% fidelity — a measure of how similar an actual outcome of an operation is to the ideal outcome. The attainment of such fidelities is one of the remarkable technical achievements that enabled this work. Arute and colleagues determined the fidelities using a protocol known as cross-entropy

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benchmarking (XEB). This protocol was introduced last year³ and offers certain advantages over other methods for diagnosing systematic and random errors.

Verifying quantum supremacy for the sampling problem is challenging, because this is precisely the regime in which classical simulations are infeasible. To address this issue, Arute et al. first carried out experiments in a classically verifiable regime using three different circuits: the full circuit, the patch circuit and the elided circuit. The full circuit used all n qubits and was the hardest to simulate. The patch circuit cut the full circuit into two patches that each had about $n/2$ qubits and were individually much easier to simulate. Finally, the elided circuit made limited two-qubit connections between the two patches, resulting in a level of computational difficulty that is intermediate between those of the full circuit and the patch circuit.

The Emergence of Deepfake Technology: A Review

In recent years, fake news has become an issue that is a threat to public discourse, human society, and democracy. Fake news refers to fictitious news style content that is fabricated to deceive the public. False information spreads quickly through social media, where it can impact millions of users. Presently, one out of five Internet users get their news via YouTube, second only to Facebook. This rise in popularity of video highlights the need for tools to confirm media and news content authenticity, as novel technologies allow convincing manipulation of video. Given the ease in obtaining and spreading misinformation through social media platforms, it is increasingly hard to know what to trust, which results in harmful consequences for informed decision making, among other things. Indeed, today we live in what some have

called a “post-truth” era, which is characterized by digital disinformation and information warfare led by malevolent actors running false information campaigns to manipulate public opinion. Recent technological advancements have made it easy to create what are now called “deepfakes”, hyper-realistic videos using face swaps that leave little trace of manipulation. Deepfakes are the product of artificial intelligence (AI) applications that merge, combine, replace, and superimpose images and video clips to create fake videos that appear authentic. Deepfake technology can generate, for example, a humorous, pornographic, or political video of a person saying anything, without the consent of the person whose image and voice is involved. The game-changing factor of deepfakes is the scope, scale, and sophistication of the technology involved, as almost anyone with a computer can fabricate fake videos that are practically indistinguishable from authentic media. While early examples of deepfakes focused on political leaders, actresses, comedians, and entertainers having their faces weaved into porn videos, deepfakes in the future will likely be more and more used for revenge porn, bullying, fake video evidence in courts, political sabotage, terrorist propaganda, blackmail, market manipulation, and fake news. While spreading false information is easy, correcting the record and combating deepfakes are harder. In order to fight against deepfakes, we need to understand deepfakes, the reasons for their existence, and the technology behind them. However, scholarly research has only recently begun to address digital disinformation in social media. As deepfakes only surfaced on the Internet in 2017, scholarly literature on the topic is sparse. Hence, this study aims to discuss what deepfakes are and who produces them, what the benefits and threats of deepfake technology

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are, some examples of current deepfakes, and how to combat them.

What Are Deepfakes?

A combination of "deep learning" and "fake", deepfakes are hyper-realistic videos digitally manipulated to depict people saying and doing things that never actually happened. Deepfakes rely on neural networks that analyze large sets of data samples to learn to mimic a person's facial expressions, mannerisms, voice, and inflections. The process involves feeding footage of two people into a deep learning algorithm to train it to swap faces. In other words, deepfakes use facial mapping technology and AI that swaps the face of a person on a video into the face of another person. Deepfakes surfaced to publicity in 2017 when a Reddit user posted videos showing celebrities in compromising sexual situations. Deepfakes are difficult to detect, as they use real footage, can have authentic-sounding audio, and are optimized to spread on social media quickly. Thus, many viewers assume that the video they are looking at is genuine. Deepfakes target social media platforms, where conspiracies, rumors, and misinformation spread easily, as users tend to go with the crowd. At the same time, an ongoing 'infopocalypse' pushes people to think they cannot trust any information unless it comes from their social networks, including family members, close friends or relatives, and supports the opinions they already hold. In fact, many people are open to anything that confirms their existing views even if they suspect it may be fake. Cheap fakes, that is, low-quality videos with slightly doctored real content, are already everywhere because low-priced hardware such as efficient graphical processing units are widely available. Software for crafting high-quality, realistic deepfakes for disinformation is increasingly available

as open source. This enables users with little technical skills and without any artistic expertise to near-perfectly edit videos, swap faces, alter expressions, and synthesize speech.

As for technology, deepfakes are the product of Generative Adversarial Networks (GANs), namely two artificial neural networks working together to create real-looking media. These two networks called 'the generator' and 'the discriminator' are trained on the same dataset of images, videos, or sounds. The first then tries to create new samples that are good enough to trick the second network, which works to determine whether the new media it sees is real. That way, they drive each other to improve. A GAN can look at thousands of photos of a person, and produce a new portrait that approximates those photos without being an exact copy of any one of them. In the near future, GANs will be trained on less information and be able to swap heads, whole bodies, and voices. Although deepfakes usually require a large number of image to create a realistic forgery, researchers have already developed a technique to generate a fake video by feeding it only one photo such as a selfie.

Why Data Science is a Good Career in

2020?

"Data Science is named as the bestest job of 21st Century by Harvard Business Review". It's true that data science has been in demand since the last few years with billions of data been exchanging worldwide and the demand for data scientists has rapidly increased with the increase in data. According to a study, it was found that there is a requirement of 28% more data scientists worldwide. If you are looking to make a career in data science never mind to regret your choice startups today are welcoming young data scientists to join their community.

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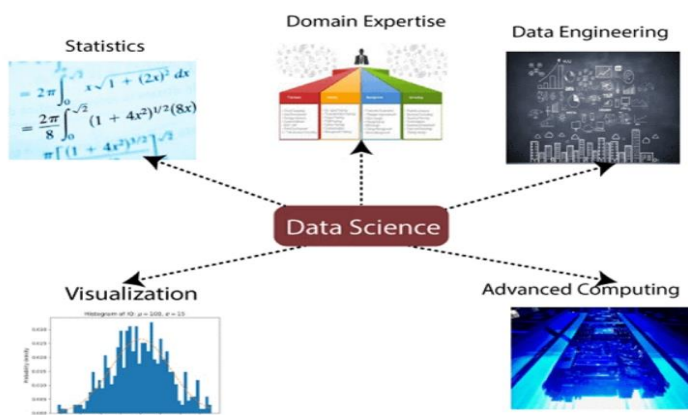
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In 2019, 2.9 Million data science job openings were required it is said that the current year 2020 will see more increase in job openings than in the previous year.

What is Data Science?

Data Science is a field that uses scientific methods, algorithms, processes, and systems to extract insights from structured and unstructured data. In simple terms, it is the science of dealing with data in order to convert the data into information and knowledge.

What are Data Science Components?



In a big organization (ex: bank) a large amount of data is present in multiple systems of different departments. Data engineering is used to extract data from multiple sources and clean it. Visualization is used to represent the data in graphical format in order to understand the visible patterns and characteristics of the process which generated the data. Statistical algorithms and domain expertise are used to find hidden patterns and relations that can be used to benefit the organization. Advanced computing infrastructure helps in processing a large amount of data.

Data Science Job Roles in 2020:

Below are some sectors where the need for a Data Scientist is huge with the demand of data increasing the jobs certainly will have a growth in 2020.

Cyber Security, Healthcare, Agriculture, Aviation, eCommerce Industries, and Information Technology. These are the industries where the data flow like water and the demand for data scientists can skyrocket in these sectors.

Below mentioned job roles will come into a place where ever the data is available for processing and dealing with it.

Project Sponsor: The person or department which funds the project

Business User: The person or department which uses a machine learning model

Project Manager: Plans project schedule and monitors project execution. Coordinates with other departments and teams in order to get required resources for the data science team

Database Administrator: Helps the data science team in identifying the sources of the data, metadata about the data. It helps the data engineers in getting the data from various sources.

Data Engineer: With the help of database administrator, extracts the data from different sources, cleans the data and transforms the data into the required format

Data Scientist: Explores the data, pre-process the data, build the machine learning model and evaluate it

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Business Intelligence Analyst: Has domain knowledge and helps data scientist in exploring the data

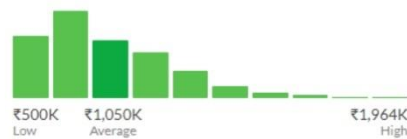
Salaries of a Data Scientist in 2020:

Data Scientist Salaries in India

907 Salaries Updated Feb 2, 2020

Average Base Pay

₹1,050K/yr



How much does a Data Scientist make?

The national average salary for a Data Scientist is ₹10,50,000 in India. Filter by location to see Data Scientist salaries in your area. Salary estimates are based on 907 salaries submitted anonymously to Glassdoor by Data Scientist employees.

As the name suggests the career of a data scientist is challenging, but the credit generated out of it adds value to it making it the highest paid jobs in the world. Yes, as of 2020, According to Glassdoor, the average salary of data scientists in India is Rs.1050K/Year. And, when it comes to the United States the average base pay is \$113,309/Year.

The above image describes how good a salary is for a data scientist and how companies are striving to hire a data scientist because data is dominating the world, without data their no industry on this planet. Data makes decisions, strategy, planning, implementations, and executions.

BENEFITS AND RISKS OF ARTIFICIAL INTELLIGENCE

From SIRI to self-driving cars, artificial intelligence (AI) is rapidly. While science fiction often portrays AI as robots with human-like characteristics, AI can encompass anything from Google's search algorithms to IBM's Watson to autonomous weapons.

Artificial intelligence today is properly known as narrow AI (or weak AI), in that it is designed to perform a narrow task (e.g. only facial recognition or only internet searches or only driving a car). However, the long-term goal of many researchers is to create general AI (AGI or strong AI). While narrow AI may outperform humans at whatever its specific task is, like playing chess or solving equations, AGI would outperform humans at nearly every cognitive task.



HOW CAN AI BE DANGEROUS?

Most researchers agree that a super intelligent AI is unlikely to exhibit human emotions like love or hate, and that there is no reason to expect AI to become intentionally benevolent or malevolent. Instead, when considering how AI might become a risk, experts think two scenarios most likely:

1. **The AI is programmed to do something devastating:** Autonomous weapons are artificial intelligence systems that are programmed to kill. In the hands of the wrong person, these weapons could easily cause mass casualties. Moreover, an AI arms race could inadvertently lead to an AI war that also results in mass casualties. To avoid being thwarted by the enemy, these weapons would be designed to be extremely difficult to simply “turn off,” so humans could plausibly lose control of such a situation. This

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risk is one that's present even with narrow AI, but grows as levels of AI intelligence and autonomy increase.

2. The AI is programmed to do something beneficial, but it develops a destructive method for achieving its goal: This can happen whenever we fail to fully align the AI's goals with ours, which is strikingly difficult. If you ask an obedient intelligent car to take you to the airport as fast as possible, it might get you there chased by helicopters and covered in vomit, doing not what you wanted but literally what you asked for. If a super intelligent system is tasked with a ambitious geoengineering project, it might wreak havoc with our ecosystem as a side effect, and view human attempts to stop it as a threat to be met.

WHY THE RECENT INTEREST IN AI SAFETY?

Stephen Hawking, Elon Musk, Steve Wozniak, Bill Gates, and many other big names in science and technology have recently expressed concern in the media and via open letters about the risks posed by AI, joined by many leading AI researchers. Why is the subject suddenly in the headlines?

The idea that the quest for strong AI would ultimately succeed was long thought of as science fiction, centuries or more away. However, thanks to recent breakthroughs, many AI milestones, which experts viewed as decades away merely five years ago, have now been reached, making many experts take seriously the possibility of superintelligence in our lifetime. While some experts still guess that human-level AI is centuries away, most AI researches at the 2015 Puerto Rico Conference guessed that it would happen before 2060. Since it may take decades to

complete the required safety research, it is prudent to start it now.

FLI's position is that our civilization will flourish as long as we win the race between the growing power of technology and the wisdom with which we manage it. In the case of AI technology, FLI's position is that the best way to win that race is not to impede the former, but to accelerate the latter, by supporting AI safety research.

THE TOP MYTHS ABOUT ADVANCED AI

A captivating conversation is taking place about the future of artificial intelligence and what it will/should mean for humanity. There are fascinating controversies where the world's leading experts disagree, such as: AI's future impact on the job market; if/when human-level AI will be developed; whether this will lead to an intelligence explosion; and whether this is something we should welcome or fear. But there are also many examples of boring pseudo-controversies caused by people misunderstanding and talking past each other. To help ourselves focus on the interesting controversies and open questions — and not on the misunderstandings — let's clear up some of the most common myths.

“utter bilge” in 1956. The most extreme form of this myth is that superhuman AI will never arrive because it's physically impossible. However, physicists know that a brain consists of quarks and electrons arranged to act as a powerful computer, and that there's no law of physics preventing us from building even more intelligent quark blobs.

There have been a number of surveys asking AI researchers how many years from now they think we'll have human-level AI with at least 50% probability. All these surveys have the same

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conclusion: the world's leading experts disagree, so we simply don't know. For example, in such a poll of the AI researchers at the 2015 Puerto Rico AI conference, the average (median) answer was by year 2045, but some researchers guessed hundreds of years or more.

There's also a related myth that people who worry about AI think it's only a few years away. In fact, most people on record worrying about superhuman AI guess it's still at least decades away. But they argue that as long as we're not 100% sure that it won't happen this century, it's smart to start safety research now to prepare for the eventuality. Many of the safety problems associated with human-level AI are so hard that they may take decades to solve. So it's prudent to start researching them now rather than the night before some programmers drinking Red Bull decide to switch one on.

It may be that media have made the AI safety debate seem more controversial than it really is. After all, fear sells, and articles using out-of-context quotes to proclaim imminent doom can generate more clicks than nuanced and balanced ones. As a result, two people who only know about each other's positions from media quotes are likely to think they disagree more than they really do. For example, a techno-skeptic who only read about Bill Gates's position in a British tabloid may mistakenly think Gates believes superintelligence to be imminent. Similarly, someone in the beneficial-AI movement who knows nothing about Andrew Ng's position except his quote about overpopulation on Mars may mistakenly think he doesn't care about AI safety, whereas in fact, he does. The crux is simply that because Ng's timeline estimates are longer, he naturally tends to prioritize short-term AI challenges over long-term ones.

When VR Makes a Cut as an Experiential Tool for the Surgeons

If the medicine is all about saving and improving lives, medical technology is all about making that easier, more precise and less troublesome for both doctors and patients.



There is one catch, though. It takes diligence and many years of hard work to master the complex human body sufficiently enough to follow the basic principle of medicine—*primum non nocere* (first, do no harm). Technology is like a teenager on adrenaline; doesn't stay still, is always on the go and not easy to catch up with. Moving away from medicine for a minute, as a manufacturer of medical devices, you are acutely conscious of your competition.

For you to do well commercially, you must provide an engaging experience and a forceful argument for your customer to prefer your product over that of the competition. That advantage could be in terms of cost, technology, or, as we will see here, the use of technology to make it easier to use the device while ensuring one will “do no harm.”

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Imagine you are a surgeon looking for a specific organ inside the body. You need to get in, repair a portion and get out without damaging anything else. How about doing this blindfolded?

Relax! Technology helps surgeons “see” what their eyes directly cannot. Not only that, technology will also help them get in and out without causing any harm along the way.

For example, some deft cystoscopy can ensure the ureters are not harmed during a laparoscopic hysterectomy. Let us see how virtual reality (VR) can make it happen.



Small cuts for big gains

Whenever a surgeon needs to access an organ packed away in the rather crowded abdomen, the conventional approach is to make a cut that can be up to 12 inches long. You need that wide an opening to see what you are doing and to reach inside. Among other things, that will keep the patient in the hospital longer and will leave one with a rather prominent scar.

Enter laparoscopy. In this procedure, instead of one big opening, the surgeons make a series of small cuts. They insert a laparoscope, a slender device that has a tiny video camera and light, and other special

instruments through the cuts. Job done, the tiny cuts heal fast, and the patient is out of the hospital quick.

Hysterectomy is a procedure where a gynecologist removes the uterus. Most patients and surgeons prefer the laparoscopic route for this surgery. The most common complication during a laparoscopic hysterectomy is the collateral damage to the ureters, which cannot be easily seen.

What if there was some way to light up the ureters? Good idea! Except that gynecologists are not urologists. The latter are more familiar with the cystoscopy procedure required to enter the ureter. If you simply add a urologist to the surgical team, you will add to the cost.

Can technology make gynecologists more comfortable with the idea of inserting a light into the ureters? This is where the digital agency comes in.

Bridging practice and perfection

Virtual reality is already an important medical training tool that both teaches and sharpens surgical skills. It takes time to hit your stride after residency. As research has established, until the surgeon gains experience there is an increasing likelihood of adding to complications and, worse, mortality rates. Thankfully, VR helps surgeons to stay sharp wherever they are in their career.

What about marketing? VR tends to be associated with sci-fi and fantasy, neither of which can help the maker of sophisticated surgical devices and solutions. When it is a question of saving a life or improving its quality, the challenge is to provide a marketing solution that does the job efficiently without distraction.

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Will technology finally break the walls between medical specialties? Unlikely! However, technology can help you reach across the wall and borrow a skill if that is in the best interest of the lives you are trying to heal. Why stop at doing no harm when VR can help you do good better!

Dogecoin's a Joke. Don't Make Yourself the Punchline.

Dogecoin, the cryptocurrency that literally began as a joke, has shushed some doubters with a meteoric rise. But the bears could have the last laugh.



Good artists copy, great artists steal. The pithy observation often attached to Picasso appears to apply not only to the art world, but to cryptocurrency as well.

Back in 2013, the creators of **Dogecoin** never intended the virtual currency to serve as anything more than a comedic parody of Bitcoin. They certainly never envisioned it as an investment that stores any appreciable value or represents a material holding in someone's diversified portfolio.

In fact, they first positioned the altcoin, or non-Bitcoin cryptocurrency, as a joke – not an actual investment to hold in your portfolio.

Dogecoin now garners considerable retail investor attention, following in the footsteps of other financial fashion fads presenting themselves in 2021, such as GameStop (GME), SPACs or non-fungible tokens (NFTs).

But many of the investments have delivered flash-in-the-pan returns that are now finding more losers than winners. And similar to those other headline-grabbing investments, many people likely will be left holding the bag on Dogecoin.

Dogecoin is a cryptocurrency, or digital representation of money, that operates on a peer-to-peer transaction network called the blockchain. These trades get logged in a virtual decentralized ledger by people verifying them through "mining" (or "digging," in the case of Dogecoin – the token's creators said dogs don't "mine") and receiving a nominal amount of the virtual currency in return.

The coin's founders designed it as a satirical take on Bitcoin, though without the virtue signalling many have come to see Bitcoin representing. Instead, Dogecoin's founders saw no real purpose for the coin beyond generating laughs.

While Dogecoin accomplishes many of the same functions of other virtual and fiat currencies, tasks like facilitating commerce, storing value and acting as a unit of account, it doesn't do anything unique to explain its meteoric rise. Rather, it's just like the virtual currencies before it, but with investors' standards lower, bidding up the price for you to believe it's real.

But make no mistake: Just like the hot air that's leaving (or already left) these other "meme" investments made famous by 2021, so too will Dogecoin deflate.

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How Did Dogecoin Get Here?

Dogecoin's journey requires suspended disbelief. Most saw it as a joke relegated to social media banter or, at best, a caricature mocking the entire emergence of cryptocurrencies.

What's been driving its recent rise to a market valuation greater than several publicly traded companies in the Fortune 500 has in large part come from three contributing factors:

1. Individual investors using Robinhood and other free stock trading apps to place commission-free trades in and out of the currency.
2. A third wave of stimulus checks that has fuelled the market's epic rise over the last year
3. Retail investors taking to social media sites like Reddit and Twitter to source investment ideas

To demonstrate the sheer silliness that can impact this coin, those trumpeting the virtual currency aimed to pump the value to as high as \$1 per Dogecoin on April 20. The date, colloquially known as "4/20," is effectively an unofficial holiday celebrating marijuana. While this effort failed, it shows the susceptibility of this coin's price to be influenced by more than market fundamentals.

However, Dogecoin's remarkable rally can only truly be tied to this hype. The currency doesn't provide a unique, moat-laden investment rationale to justify this valuation. It also fails to serve a market need not met by the other major cryptos in circulation.

Bitcoin started the crypto revolution and continues to offer value from its first-mover advantage and its

relative scarcity. Ethereum powers the DeFi, or Decentralized Finance, network removing the need for many existing financial institutions. Ripple, or XRP, uses a different authenticity verification technique than Bitcoin, called "proof-of-stake" as opposed to "proof-of-work" employed in traditional crypto mining.

Dogecoin does none of this. And it adds no driving reason behind its incredible rise to date.

The moral of this Dogecoin story is that the market price has moved not due to fundamental values nor being a differentiated asset. Instead, it has moved largely thanks to social media pumpers and media bodies.

That has made for a fantastic ride (and plenty of bragging rights) for early speculators. But it doesn't make for a sustainable investment strategy.

Apple iOS 14.5: Facebook hints you may have to pay for its main app, Instagram in future

The notices that we see in both the apps show the same message. "Help keep Facebook/Instagram free of charge". The notifications are also said to be designed to be shown before Apple's system-level ATT alert.



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Apple and Facebook have been in a long tussle with each other ever since the former announced it is bringing App Tracking Transparency (ATT) feature in iOS 14.5. This new feature in the iPhone OS version that was released recently, indirectly forces apps to add a system-level prompt request, asking customers if the app can track them for tailored and useful ads. Facebook was not in favour of this as it thought many might disable this feature and it would hurt their advertisement business. So, the social media giant is doing its best to educate iPhone customers why they can leave app tracking enabled.

For this, Mark Zuckerberg's firm is now said to add new screens for both its main app and Instagram. The screens are supposed to tell iPhone users on iOS 14.5 that enabling tracking under Apple's App Tracking Transparency policy will "help keep" the apps free to use. Hints of it were found in both the main Facebook app and Instagram app by researcher Ashkan Soltani. The screenshots of the feature are posted by him on Twitter.

The notices that we see in both the apps show the same message. "Help keep Facebook/Instagram free of charge". The notifications are also said to be designed to be shown before Apple's system-level ATT alert. In addition, the notifications also mention what this latest version of iOS requires and how the social media firm limits the use of customer's information.

"This version of iOS requires us to ask for permission to track some data from this device to improve your ads. Learn how we limit the use of this information if you don't turn on this device setting." This is followed by three options, one of which we mentioned above. The other two are "Show you ads that are more personalised" and "Support businesses that rely on ads

to reach their customers". At the bottom of the screen one can see the 'Continue' option as well.

The most worrying part here is the "Help keep Facebook/Instagram free of charge". This indicates that the company might end up charging users for the service at some point.

Facebook has already detailed the impact of ATT to its clients in a note last month. It talked about the restrictions in availability of ad targeting and metrics tools and a possible impact on audience engagement.

Tesla says totally self-driving cars likely aren't happening in 2021



Tesla

A Tesla engineer has admitted to California regulators the company probably won't have a completely self-driving car ready for operation this year. That's despite CEO Elon Musk saying during a January earnings call the company was "highly confident" it would achieve full autonomy in 2021.

The admission comes from a document of exchanges dated May 6 between the California Department of Motor Vehicles and CJ Moore, an Autopilot engineer

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working for Tesla, released via the legal transparency group Plain-Site. "Tesla indicated that Elon is extrapolating on the rates of improvement when speaking about [Level 5] capabilities," part of the memo from the DMV read. "Tesla couldn't say if the rate of improvement would make it to L5 by end of calendar year."

Level 5 capabilities refers to a fully autonomous car on the SAE scale of autonomy. Anything Tesla currently employs today, from Autopilot to the "Full Self-Driving" beta, registers as a Level 2 driver-assist system -- *not* a self-driving car. The memo added Tesla remains "firmly" in L2 technology.

Tesla does not operate a public relations department to field requests for comment. The California DMV did not immediately return a request for comment.

The automaker continues to take a unique approach to realizing the goal of a truly autonomous car: While other companies and rival automakers focus on lidar to help a car "see," Tesla hopes a neural network combined with sensors, radar and cameras will create a smart car good enough to drive itself.