



BITS & BYTES



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COMMITTEE

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IT DEPARTMENT'S VISION

Impart quality education to create world class technocrats and entrepreneurs with new ideas and innovations to meet industry expectations and uplifting human lives.

IT DEPARTMENT'S MISSION

To deliver curriculum with practical aspects to fill the gap between the industry demands, institutes and society needs.

To build an atmosphere that will support innovative ideas and research and turn them to products through practical exposure and interactions to the industries.

To develop IT professionals with qualities of leadership, teamwork and ethical values who will be an asset to the nation and digital India mission.

To encourage co-curriculum activities that can enhance technical and presentation skills and also provide ideas of entrepreneurship for the development of the students as professionals.

" As a leader, It is important to not just see your own success, but focus on the success of other "

- Sundar Pichai



MESSAGE FROM THE ON CAMPUS DIRECTOR & THE PRINCIPAL

" It gives me immense pleasure to present 'Bits & Bytes', the innovative magazine of Information Technology Department. It is said that, "The more that you read, the more things you will know. I applaud the initiative taken by the Head of Department, faculties and enthusiastic participation of all the students in presenting this unique concept that would serve as an encouraging platform for the readers to contemplate and contribute, for creative expressions, for technical presentations and also for academic achievements. I hope you will enjoy reading 'Bits & Bytes. "

- Dr. Jitendra B. Patil, Campus Director

" I am very much honored and pleased that department of Information Technology Engineering has involved in many technical and other activities In building up the student career. Students from Information Technology Engineering department have brought laurels to the institute through their contributions in different activities like academic and research. I extend my hearty congratulations to the entire faculty and students of department of Information Technology Engineering for releasing their first newsletter with great enthusiasm and effort to achieve success."

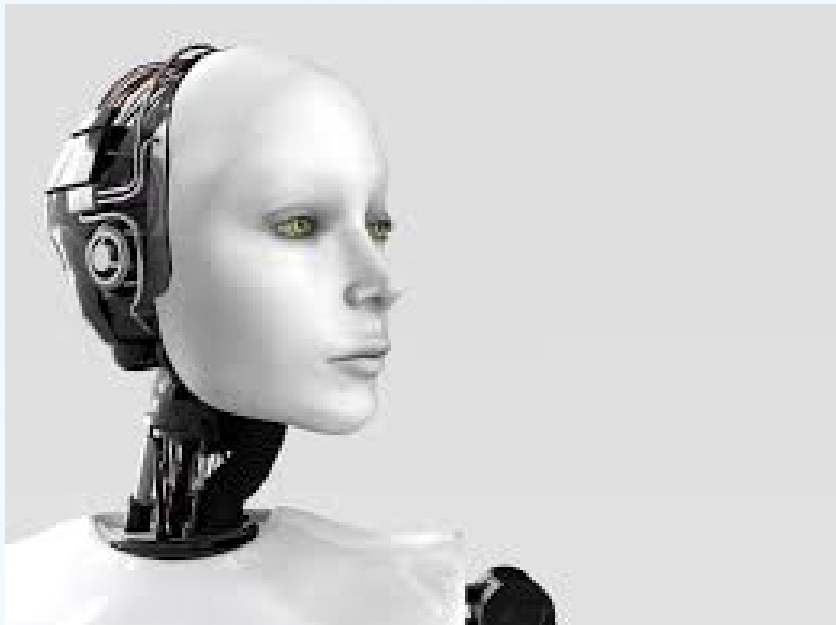
- Dr. Ajoy Kumar, Principal

FROM HOD's TABLE

" It gives me immense pleasure to express my views regarding Department of Information Technology. The Main focus is to have effective Teaching Learning process for the students to make them well acquainted in the field of Information Technology to cope up with the industry needs. The department also encourages research in the field Information Technology. "

- Prof. Yogita Mane, HOD
Information Technology

Should we worry about Computer Algorithm's Mental Health??



Is my car hallucinating? Is the algorithm that runs the police surveillance system in my city paranoid? Marvin the android in Douglas Adams's *Hitchhikers Guide to the Galaxy* had a pain in all the diodes down his left-hand side. Is that how my toaster feels?

This all sounds ludicrous until we realize that our algorithms are increasingly being made in our own image. As we've learned more about our own brains, we've enlisted that knowledge to create algorithmic versions of ourselves. These algorithms control the speeds of driverless cars, identify targets for autonomous military drones, compute our susceptibility to commercial and political advertising, find our soulmates in online dating services, and evaluate our insurance and credit risks. Algorithms are becoming the near-sentient backdrop of our lives.

The most popular algorithms currently being put into the workforce are deep learning algorithms. These algorithms mirror the architecture of human brains by building complex representations of information. They learn to understand environments by experiencing them, identify what seems to matter, and figure out what predicts what. Being like our brains, these algorithms are increasingly at risk of mental-health problems.

Take the case of driverless cars. A driverless car that sees its first stop sign in the real world will have already seen millions of stop signs during

training, when it built up its mental representation of what a stop sign is. Under various light conditions, in good weather and bad, with and without bullet holes, the stop signs it was exposed to contain a bewildering variety of information. Under most normal conditions, the driverless car will recognize a stop sign for what it is. But not all conditions are normal. Some recent demonstrations have shown that a few black stickers on a stop sign can fool the algorithm into thinking that the stop sign is a 60 mph sign. Subjected to something frighteningly similar to the high-contrast shade of a tree, the algorithm hallucinates.

Algorithms also make mistakes because they pick up on features of the environment that are correlated with outcomes, even when there is no causal relationship between them. In the algorithmic world, this is called overfitting. When this happens in a brain, we call it superstition.

By training algorithms on human data, they learn our biases. One recent study led by Aylin Caliskan at Princeton University found that algorithms trained on the news learned racial and gender biases essentially overnight. As Caliskan noted: 'Many people think machines are not biased. But machines are trained on human data. And humans are biased.'

Social media is a writhing nest of human bias and hatred. Algorithms that spend time on social media sites rapidly become bigots. These algorithms are biased against male nurses and female engineers. They will view issues such as immigration and minority rights in ways that don't stand up to investigation. Given half a chance, we should expect algorithms to treat people as unfairly as people treat each other. But algorithms are by construction overconfident, with no sense of their own infallibility. Unless they are trained to do so, they have no reason to question their incompetence (much like people).

Google Announces Titan Security Key To Prevent Online Threats.

The Hackers are finding new ways to get your private data. Now Google announced the Titan Security Key, it is a physical device that can be used to prevent from Cyber criminals and keep your accounts more protected.

Many of the biggest firms had been hacked including Yahoo, Adobe, Equifax, eBay and more. But according to Google it cannot be happened with them, their 85,000 employees have not been hacked since 2017. Online security must be the first recommendation in any companies to protect their clients or employees.

None of the company wants that their employees or customers would be hacked by the cyber criminals. As per security reason Google is recommending their customers to using Physical security keys for strong protection against online threats.



What are Security Keys?

Enhanced protection against phishing

2-step verification with a security key uses cryptography to provide two-way verification: it makes sure you're logging into the service you originally registered the security key with, and the service verifies that it's the correct security key as well. This provides superior protection to text-message verification.

Smooth operation

Security keys make 2-step verification easy. Simply tap the button on your key instead of retyping codes.

No phone required

Unlike other 2-step verification methods that use one-time codes via text message, security keys don't require a phone number on your account.

Titan Security Key- Google own Key

Titan Security Keys work with many devices and apps, support FIDO (Fast ID Online) protocol, and are built with a secure element and a firmware written by Google that verifies the integrity of security keys at the hardware level. Now available through your Google representative and soon in Google Store.

According to CNET, Google Product Manager for identity and security, Christian Brand, said, Titan Security Key comes in both Bluetooth and USB version and it will be available on sale in next few months in Google store.

We are very sure of the quality of the security," Brand said, We are very sure of how we store secrets and how hard it would be for an attacker to come in and blow the security up.

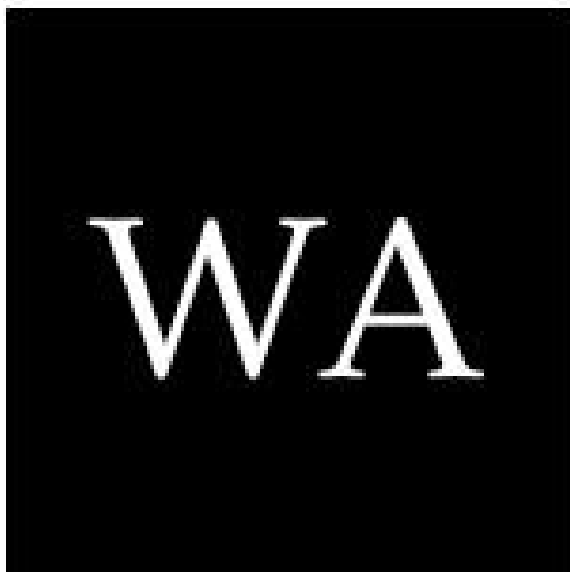
We are not very quite happy where these devices are out of reach for customers who can't afford it, Brand said." We are thinking that hopefully at some point in time, these keys can be in the sub \$10 range."

Security Key products are not new in the industry. YubiCo Yubikey is already available in market. It also offers strong two factor authentication and working on FIDO, FIDO2, U2G authentication method.

"I'm not a great programmer; I'm just a good programmer with great habits."

— Kent Beck

STUDENTS ACHIEVEMENTS



Founded in 2017 and based in Mumbai, India. WebArch is a trusted web designing and development company with SEO solutions for people to discover their business online through desktop or from mobile phone/tablets. We give a pocket friendly solution of getting a polished website on hourly basis also we have a perfect platform through which you can launch your business website let it be a small or giant business we at WebArch provide quality services. E-commerce businesses, News/blogs, Online portals, Portfolio just to name few, WebArch brings every type of websites in an easy way to the world.



Pranav Rajesh Mehta (Founder)

Website: www.web-arch.in

*"The Value of an idea lies in the using of it."
-Thomas Edison, General Electric Co-Founder*