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Synergy's W!red

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EDITOR'S MESSAGE

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Machine Learning

Machine learning is a field of artificial intelligence that uses statistical techniques to give computer systems the ability to "learn" (e.g., progressively improve performance on a specific task) from data, without being explicitly programmed

The name machine learning was coined in 1959 by Arthur Samuel.Machine learning explores the study and construction of algorithms that can learn from and make predictions on data - such algorithms overcome following strictly static program instructionsby making data-driven predictions or decisions, through building a model from sample inputs. Machine learning is employed in a range of computing tasks where designing and programming explicit algorithms with good performance is difficult or ,infeasible; example applications include email filtering .detection of network intruders, and computer vision

Machine learning is closely related to (and often overlaps with) computational statistics, which also focuses on prediction-making through the use of computers. It has strong ties to mathematical optimization, which delivers .methods, theory and application domains to the field

Machine learning is sometimes conflated with data mining, where the latter subfield focuses more on exploratory data analysis and is known as unsupervised learning

Within the field of data analytics, machine learning is a method used to devise complex models and algorithms that lend themselves to prediction; in commercial use, this is known as predictive analytics. These analytical models allow researchers, data scientists, engineers, and analysts to "produce reliable, repeatable decisions and results" and uncover "hidden insights" through learning from historical relationships and trends in the data

Project Treble

Project Treble was introduced as part of Android 8.0 Oreo and represents a major re-architecture for the OS framework. The initiative's ultimate aim is to make updates faster and easier for OEMs to roll out to devices. Treble is arguably one of the biggest changes introduced to Android, but one that consumers won't even notice as it works primarily behind .the scenes

In a word: fragmentation. It's a criticism of Android that industry followers will be very familiar with, and it's not unfounded. While iPhones receive major OS updates for three or four years, the most expensive Android smartphones are lucky to receive two, and lower cost models may never see an upgrade at all. Missing out on the latest features is unfortunate, but it's the lack of security and increasing vulnerability of these older devices that is the real worry. Not .just for users, but for Google also

VR and AR

Augmented reality and virtual reality are two of the ways that tech can change the way you look at the world. The terms can be confusing. Sometimes people think AR and VR are the same thing.Augmented reality and virtual reality are increasingly used in technology, so knowing the difference is important

Virtual reality (VR) is an artificial, computer-generated simulation or recreation of a real life environment or situation. It immerses the user by making them feel like they are experiencing the simulated reality firsthand, primarily by stimulating their vision and hearing.VR is typically achieved by wearing a headset like Facebook's Oculus equipped with the technology

Augmented reality (AR) is a technology that layers computer-generated enhancements atop an existing reality in order to make it more meaningful through the ability to interact with it. AR is developed into apps and used on mobile devices to blend digital components into the real world in such a way that they enhance one another, but can also be told apart easily

AI&CyberSecurity

The next generation of cybersecurity products are increasingly incorporating Artificial Intelligence (AI) and Machine Learning (ML) technologies. By training AI software on large datasets of cybersecurity, network, and even physical information, cybersecurity solutions providers aim to detect and block abnormal behavior, even if it does not exhibit a known "signature" or pattern. Experts anticipate that, over time, companies will .incorporate ML into every category of cybersecurity products

There are different approaches to using AI for cybersecurity, and it is important first to determine which is appropriate for the organization. Some software applications analyze raw network data to spot an irregularity, while others focus on user/asset/entity behavior to detect patterns that deviate from normal. The types of data streams, how they are collected, and the level of effort needed by analysts all vary by ap-.proach

Cybersecurity solutions utilizing AI and ML can greatly reduce the amount of time needed for threat detection and incident response, often being able to alert IT staff of anomalous behavior in real time. These technologies also help reduce and prioritize traditional security alerts, increasing the efficacy of .existing investments and human analysts

Attackers are also using AI and ML to better understand their targets and launch attacks. AI increases the ability of defenders to identify attacks, but it may also help hackers learn .about a target's vulnerabilities

By Shilpa Shekhar

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