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IoT trends 2018: artificial intelligence, security and edge solutions

We look ahead to the big IoT trends experts predict for 2018

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The Internet of Things (IoT) appeared all over the news throughout 2017, whether that was due to the development of new devices, cyber attacks using unsecured devices or even new IoT divisions from companies like Dell and Rolls-Royce, we have definitely heard a lot about the emerging sector.
Of course this comes as no surprise, as the oft-quoted Gartner prediction goes: there will be over 20 billion connected things by 2020. The increase in connected devices over the past year, from toasters to toothbrushes, shows we may be getting even closer to the forecast.

As the opportunity within the IoT sector continues to rise, businesses globally have been taking a leap to developing unique devices or searching for a way to get in on the action with emerging software or platform solutions.

Here are some IoT trends to watch out for in 2018, according to the experts.

Artificial intelligence increase

The past year has seen an overwhelming boost in the adoption of artificial intelligence in the enterprise, and IoT isn't exempt.
IoT is a rich vein for AI and machine learning application, as fleets of connected devices - take cars for example - will need to be automated to some extend so that they can react to their environment on the fly. Also the huge volumes of data these devices are creating gives AI developers a rich canvas to build upon.
Mike Bell, EVP of devices and IoT at Canonical told Computerworld UK: “I think machine learning will increasingly become popular as people don’t actually know what they’re looking for, so they can then use training data sets to analyse patterns and learn things that they didn’t understand before."

Shifting to the edge

As the rate of IoT deployments increase it is expected that edge-based compute and storage will play a more meaningful role in IoT applications, especially across industrial areas where assets are operating at long distances from core infrastructure.

According to an IDC FutureScape report, at least 40 percent of IoT-created data will be stored, processed, analysed and acted upon close or at the edge of the network by 2019.
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Bell from Canonical said: "What we’re going to see is the concept of compute everywhere. So cloud will continue to be important. You’re not going to be left with workloads but you’re going to see all workloads at the edge."

“You have the ability to run interesting workloads locally and other places where it makes sense to keep things at the edge,” he added.

Newer business models

The traditional choices made by businesses for IoT connectivity have been Wi-Fi and mobile networks. However, as IoT becomes more advanced, organisations are considering new options for connectivity, such as 5G and LPWAN, which have both seen steady increases in adoption this past year.

The development of new integrated technologies and business models will increase the importance of connectivity, and what businesses look for is low-cost connections with longevity that do not use a lot of power.

One thing that will be noticed is the new types of applications that will be developed following the use of LPWAN technology. For instance, “by including sensors within almost any asset, manufacturers can sense when a product is about to wear out and replace it with a new one,” Bell said.

Blockchain adoption

According to Igor Illunin, head of IoT practice at DataArt, blockchain has the potential to transform organisation's ability to leverage their IoT’s assets.

He said: "Blockchain technology carries the potential to take IoT's ability to help companies target consumers more efficiently to the next level. All systems of interconnected IoT devices can use blockchains to effectively and reliably organise, store and share streams of data.

"This technology is expected to play an integral role in the multitude of industries that manage real-world objects moving across different geographies, thereby making blockchain one of the top IoT trends in 2018."

Digital transformation

IoT has played a huge rule in driving transformation efforts for businesses, as companies get new insights into their assets and can create new business models based on data and analytics.

David Cearley, distinguished analyst at Gartner said: “The intelligent digital mesh is a foundation for future digital business and ecosystems. IT leaders must factor these technology trends into their innovation strategies or risk losing ground to those that do.”

Security

According to Vodafone’s IoT Barometer 2017/18, a total of 72 percent of IoT adopters expect security and privacy concerns to reduce greatly, opening the way for much-increased use of IoT.
Over the past year, security has appeared in the headlines for all the wrong reasons, and as more connected technologies are deployed it is just as likely that security challenges will only increase with the expansion of IoT.

The rise of so-called botnet attacks should force vendors who have previously sold products without considering their base-level security highly enough to make it a priority.

Bell from Canonical said: “I think we’re going to see security being taken more seriously than it has been. I think there’s general awareness as its grabbed kind of negative headlines for all the wrong reasons so these have drawn attention to make sure these things are secured."

Autonomous vehicles

The rise of ridesharing through companies like Uber and Lyft has seen an increasing interest in autonomous vehicles, which creates a huge opportunity for the application of IoT.

Transportation-as-a-Service (TaaS) is described as the shift from personally owned modes of transportation towards mobility solutions that are consumed as a service.

Theresa Bui Revon, director of strategy at Cisco IoT said: “By the end of 2018, most major automotive companies will commit to a percentage of their fleets being used as a part of ride-sharing service.

“Some will invest in existing ride-sharing services, while others will introduce their own branded offerings.”

Next steps

Overall, we predict a continued rise in IoT adoption over the coming year, with big gains to be achieved by companies that had not previously noticed the potential of IoT.

As vendors make security a priority, more devices will be developed which will draw an interest from companies to integrate into their assets and start to drive unforeseen value from them.

Original article can be found here: https://www.computerworlduk.com/iot/iot-trends-2018-artificial-intelligence-security-edge-solutions-3669388/