

The following article originally appeared in French on Challenges.fr:

https://www.challenges.fr/tribunes/ia-bitcoin-realite-augmentee-les-7-tendances-de-la-silicon-valley-pour-2018_555848

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FRANCE FINANCE ET MARCHÉS START-UP IMMOBILIER TRIBUNES CINÉMA VIE PRATIQUE LIFESTYLE VIDEOS

AI, Bitcoin, AR...the 7 Waves Silicon Valley has in store for 2018

Georges Nahon is the CEO for Orange Silicon Valley, the technology watchdog for the telecom operator based in San Francisco for more than a decade. He decrypts for Challenges the 7 major trends that should guide the research and investment of the world capital of innovation for the next 12 months.

1. The on-going domination of artificial intelligence

Technological and societal progress will be amplified in 2018 with the rise of artificial intelligence (AI) systems with increasingly strong computing performance. AI will quickly become more widespread in new applications, devices, and many different sectors. Its role in visual recognition is already seen in familiar objects, including smartphones, television decoders, television sets, computers, games, even doorbells; as well as sensors in all types of vehicles and sophisticated machines. After big data, AI pushes the boundaries of computer science and cognitive science. Furthermore, we are seeing that this software is learning more and more on its own. AI will be more closely involved with where information is collected and where it is processed. We are talking about “edge computing” – data processing at the edge of a network – which will bring us even closer to realtime digitization of the physical world. The Internet of Things (IOT) will greatly benefit from this. AI came at just the right time to exploit the huge amount of data created from IOT. It is able to make sense of the data while allowing real-time reactions. Together AI+IOT appear to be the missing link that will allow several industry sectors to be reinvented, including energy, health, and logistics.

AI will benefit from the autonomy of machines that is becoming even more widespread than autonomous cars. The general public and companies will benefit from advancements in AI notably thanks to intelligent agents that will be integrated in household objects such as intelligent speakers with or without a screen and other devices, including devices in vehicles. “Voice computing” is making a strong comeback. Our lives, just like the economy, are increasingly modeled and framed by AI. Visual recognition coupled with AI will make huge advancements in electronic commerce and client relations.

2. Enterprise in Transition: Virtualization, AI, and the Internet Giants

For companies, the progressive switch from intelligence over to information by cloud storage will lead to the virtualization of a wider range of functions. This includes the way they handle security, a key dimension, more than ever, due to the rise of ever more sophisticated hacks that have caused major damage for several years. AI is also going to play an increasing role in new computer security systems and preventing attacks.

The corporate business market is increasingly coveted by the Internet Giants who are adapting their products designed for the general public for professional use, thus reversing a classic IT trend. Their software and materials will be integrated in corporate life. Visual recognition, which has been popularized by smartphones, will find new interesting applications that raise concerns regarding privacy and fraud.

3. Augmented reality can only grow!

It is going to experience a huge development regarding mobile phones, notably because of all the new possibilities offered to us by smartphones. We will see many applications pop up in *appstores* for the general public and corporations. Virtual reality will see a rebound after a relatively quiescent 2017.

4. Cryptocurrency

Cryptocurrencies, such as *bitcoin* and *ether*, as well as their clones, are going to continue to grow quickly due to significant speculation. Because holders of this type of electronic currency are stocking up on it rather than using it for financial transactions, the price of it is going up. Entrepreneurs will also take an increasing interest in raising funds directly from investors by issuing their own cryptocurrency, a trend known as ICO (initial coin offerings), a distant cousin of IPOs or stock exchanges. Certain states can issue their own cryptocurrency, which can in turn give credibility to this domain that is considered unstable because of over speculation. The underlying technology, blockchain, finds new applications in the field of secure electronic contract management, by tracking the origin of the constituent elements of a product in decentralized and secure databases. Of course, this technology is going to take some time to mature and be able to surpass what thousands of computer scientists around the world are committed to doing every day.

5. The future is getting closer with quantum computing

The future is starting to get closer in the quantum computing field. This field is presented as computer science's last step before exceeding the capacity that all of today's computers have the power to achieve, what we call "quantum supremacy". Computer technology giants on three continents have already announced remarkable advancements, reminiscent of the beginning of the rise in power of AI outside of research laboratories. However, startups are also a part of the future and we are seeing new ones being created and funded by investments coming from risk capital. Towards the end of 2018, we should be seeing applications that put these technological advancements into practice in this field. We most likely need to wait a few more years before reaching a viable quantum computing ecosystem.

6. Saving the world with genetic engineering

An ecosystem is quickly emerging around invention allowing us to edit genes in a variety of living cells in a way that resembles editing software. Known as CRISPR-Cas9, these breakthroughs are coming out of labs (notably those located in Berkeley, California) and receiving venture backing. Agriculture, health, and the battle against severe incurable diseases will all benefit from applying these inventions.

7. An increase in acquisitions and investments in digital technology

Chinese Internet giants will proceed with acquisitions in digital technology outside of China before venturing directly into markets with their own offers. They are notably targeting the industries of the future: AI, renewable energy, quantum, and autonomous vehicles.

Venture capital investment in digital technology will be rather stable after a small recovery in 2017 despite perturbations from ICOs. When some private unicorn companies go public in 2018, this could bring about bad surprises regarding real growth. It would take 13 years to transfer the current cumulative unicorns value of \$670 billion into the public markets, at the 2017 annual average value of companies financed by US venture capital, which is around \$51.1 billion. Therefore, there's a real question as to whether there is sufficient investor appetite for so much unicorn equity in the (admittedly robust) current stock market. Uber's entry in the stock market in 2018 will be an interesting test.

In the United States, there will be more acquisition activity in the media, internet, and AI with big business. Governments will try to intervene to attempt to regulate or prevent concentrations deemed too dangerous (for whom?). The outcome of AT&T's purchase of Time Warner will be an interesting precursor in the American market at the very least, even as more blockbuster mergers such as Disney and 21st Century Fox are put forth.

Like 2017, the coming year is promising to be a wonderful time for people who are optimistic about technology. There are many of us, including yours truly.

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