Event

OrionX 2016 Artificial Intelligence Issues and Predictions

In this report, we discuss some of the issues and trends in Artificial Intelligence and some related fields and global trends.

1- Cryptocurrencies drive modernization of money (the original virtualization technology)

Money was the original virtualization technology! It decoupled value from goods, simplified commerce, and enabled the service economy. Free from the limitations of physical money, cryptocurrencies can take a fresh approach to simplifying how value (and ultimately trust, in a financial sense) is represented, modified, transferred, and guaranteed in a self-regulated manner. While none of the existing implementations accomplish that, they are getting better understood and the ecosystem built around them will point the way toward a true digital currency.

2- Autonomous tech remains a fantasy, technical complexity is in fleet networks, and all are subordinate to the legal framework

Whether flying, driving, walking, sailing, or swimming, drones and robots of all kinds are increasingly common. Full autonomy will remain a fantasy except for very well defined and constrained use cases. Commercial success favors technologies that aim to augment a human operator. The technology complexity is not in getting one of them to do an acceptable job, but in managing fleets of them as a single network. But everything will be subordinate to an evolving and complex legal framework.

3- Quantum computing moves beyond "is it QC?" to "What can it do?"

A whole new approach to computing (as in, not binary any more), quantum computing is as promising as it is unproven. Quantum computing goes beyond Moore's law since every quantum bit (qubit) doubles the computational power, similar to the famous wheat and chessboard problem. So the payoff is huge, even though it is, for now, expensive, unproven, and difficult to use. But new players will become more visible, early use cases and gaps will become better defined, new use cases will be identified, and a short stack will emerge to ease programming. This is reminiscent of the early days of computing so a visit to the Computer History Museum would be a good recalibrating experience.

4- The "gig economy" continues to grow as work and labor are better matched

The changing nature of work and traditional jobs received substantial coverage in 2015. The prospect of artificial intelligence that could actually work is causing fears of wholesale elimination of jobs and management layers. On the other hand, employers routinely have difficulty finding talent, and employees routinely have difficulty staying engaged. There is a structural problem here. The "sharing economy" is one approach, albeit legally challenged in the short term. But the freelance and outsourcing approach is alive and well and thriving. In this model, everything is either an activity-sliced *project,* or a time-sliced *process*, to be performed by the most suitable internal or external resources. Already, in Silicon Valley, it is common to see people carrying 2-3 business cards as they match their skills and passions to their work and livelihood in a more flexible way than the elusive "permanent" full-time job.

Additional Issues & Predictions

The following topics are caused by and impact the world of technology and are worthy of consideration. AI will undoubtedly play a role but they are not categorized under AI.

5- Design thinking becomes the new driver of customer-centric business transformation

With the tectonic shifts in technology, demographic, and globalization, companies must transform or else. Design thinking is a good way to bring customer-centricity further into a company and ignite employees' creativity, going beyond traditional "data driven needs analysis." What is different this time is the intimate integration of arts and sciences. What remains the same is the sheer difficulty of translating complex user needs to products that are simple but not simplistic, and beautiful yet functional.

6- Energy technology, risk management, and climate change refashion the world

Energy is arguably the most important industry on the planet. Advances in energy efficiency and sustainable energy sources, combined with the debate and observations of climate change, and new ways of managing capacity risk are coming together to have a profound impact on the social and political structure of the world, as indicated by the Paris Agreement and the recent collapse in energy prices. These trends will deepen into 2016.

7- Design thinking becomes the new driver of customer-centric business transformation

With the tectonic shifts in technology, demographic, and globalization, companies must transform or else. Design thinking is a good way to bring customer-centricity further into a company and ignite employees' creativity, going beyond traditional "data driven needs analysis." What is different this time is the intimate integration of arts and sciences. What remains the same is the sheer difficulty of translating complex user needs to products that are simple but not simplistic, and beautiful yet functional.

8- Mobile devices move towards OS-as-a-Service

Mobile devices are now sufficiently capable that new features may or may not be needed by all users and new OS revs often slow down the device. Even with free upgrades and pre-downloaded OS revs, it is hard to make customers upgrade, while power users jailbreak and get the new features on an old OS. Over time, new capabilities will be provided via more

modular dynamically loaded OS services, essentially a new class of apps that are deeply integrated into the OS, to be downloaded on demand.

9- Security: Cloud-native, Micro-zones, and brand new strategies

Cybercrime is big business and any organization with digital assets is vulnerable to attack. As Cloud and Mobile weaken IT's control and IoT adds many more points of vulnerability, new strategies are needed. Cloud-native security technologies will include those that redirect traffic through SaaS-based filters, Micro-Zones to permeate security throughout an app, and brand new approaches to data security.