**The state of AI**

The importance of artificial intelligence (AI) has been vouched for since the 1950s. Yet, it’s only within the last five years that a great buzz has been generated, owing to its allegiance to ‘deep learning’. This is where artificial systems imbibe information and in turn attune themselves to ‘learn’ by repeatedly working through large numbers of similar parameters. The constant feeding of ‘similar set programs’ built, what can be referred to, as intuitive framework. What insight is dawning upon us is that we are witnessing an upwards trend in the number of things happening within artificial systems; with increasing levels of capabilities and with all of the advancements made in artificial intelligence and machine learning today, there seems to be an influx of tools and solutions that are starting to leverage cognitive capabilities.

There are three main ingredients that are necessary for true intelligence: the brain, the body, and the mind. The brain consists of the algorithms or mathematics behind the software, working with incoming data. The body is the hardware the intelligence lives in. And the mind is the computing power that runs the algorithms.Today, all three ingredients are converging, making it easier and cost-efficient for the field to take off.

**The digital brains behind AI**

Artificial Intelligence is a feature developers and businesses are striving to include in their services and solutions; but those businesses and developers are going to have to leverage digital brains that are already in place.

The major digital brains in the space are:

**Facebook:** Facebook has an AI research department that is dedicated to advancing machine learning and developing intelligent machines. Recently the company open-sourced its AI hardware design, codenamed Big Sur, which handles AI computing at a large scale. It also announced new algorithms such as DeepMask, a segmentation framework; DeepText, the company’s deep learning-based text understanding engine; SharpMask, a segment refinement model; and MultiPathNet, an object detection solution. In addition, Facebook CEO Mark Zuckerberg announced plans to unveil his personal AI assistant to the world very soon.

**Google:** Google recently open-sourced its TensorFlow library for machine learning. According to Anglin, TensorFlow is a little bit more complex than other cognitive services, but it wraps up a lot of scientific programming and packages it in a way that the average application developer can leverage and embed in their applications.

**IBM Watson:** IBM Watson is a cognitive system that is designed to understand data, reason, and learn at scale. It provides cognitive APIs that leverage natural language processing and machine learning—among other things—to analyze data, learn from data, and derive insights. “There is value to be gained from systems that go beyond general abstractions and reason in specialized ways,” said IBM’s Nwuke.

**Microsoft:** Microsoft provides cognitive services that allow developers to build Android, iOS and Windows apps using powerful intelligence algorithms. The services include APIs for vision, speech, language and knowledge.

“We will have our hands full of very effective digital brains from these major players, and people choosing to go out on their own will have a hard time really competing.

**Should we fear artificial intelligence?**  
There is a fear that artificial intelligence will not only replace our jobs in the future, but that the machines will also get so smart they will take over and end civilization “Some people attach a stigma to artificial intelligence, they think the technology somehow challenges or endangers the world as we know it,” said IBM’s Nwuke. But he believes the future of artificial intelligence just means machines will be able to bring more value to businesses, professionals and consumers.

“The technology offers a level of collaboration between man and machine that augments and expands human efforts” The problem is that most of society doesn’t have enough of understanding of the technology.

There are many fantasies about AI that people perpetuate, beginning with the assumption that we can build an artificial intelligence. “We can’t. If too many senior executives buy into anthropomorphic assumptions about conversational interfaces—for example, they are indistinguishable from people [or] they can learn by observing everything they need to know to replace all the people in your call center—then too many projects will fail and be shut down.”

**The next step**  
Today, while AI is most commonly cited for image recognition, natural language processing and voice recognition, this is just the very beginning of what we think of as learning. From here, developers and data scientists will have to look at how we understand the concept between objects, and go beyond just the very basics of picking out an object and understanding everything in a picture.

Compelled by a nascent desire for innovation and advancement, mankind's quest for technological prowess is rooted in its earliest days. In fact, we have always been tinkerers. Through the use of an abundant imagination and burning desire to bend the limitations of what was once deemed impossible, we have tested the boundaries of the abstract with new technologies, blazing a trail towards their reality.

Over and over again, the human imagination has given birth to former science-fiction fantasies. From pocket computers, to self-driving cars, space tourism, [virtual reality](http://www.forbes.com/sites/robertadams/2016/03/21/5-reasons-why-virtual-reality-is-a-game-changer/), and now, [artificial intelligence](http://www.engadget.com/2015/10/13/robot-future-the-inevitable-rise-of-a-i/), we have blurred the lines of both fantasy and fiction through wild-eyed innovators that have focused wholeheartedly on their dreams, ultimately bringing them to fruition.

Today, artificial intelligence (AI), which was once thought to live purely in the realm of the human imagination, is a very real and looming prospect. In a case of life imitating art, we're faced with the question of whether artificial intelligence is dangerous and if its benefits far outweigh its potential for very serious consequences to all of humanity. It's no longer a question of if, but when.

Not many would disagree with the fact that we're on a direct trajectory towards a future laden with AI. Machine super-intelligence is most certainly upon us, but what does the future hold for earth's inhabitants? What happens if AI's human wranglers aren't able to contain the machines? Will we have a real life SkyNet operating on the same fundamental principles that drive organisms towards survival of the fittest?

In a now-very-ominous film called The Matrix, the Wachowskis portrayed a fantastical future where humans provided the source of energy for the machines. In the film, the real world as experienced by those who were living in this fantasy was all just a product of a machine algorithm, when in fact the actual reality was a creepy fluid-filled coffin keeping the lights on, so to speak.

The machines had taken over in The Matrix. In the Terminator series, we saw a similar demise spelled out for humanity. Not only had machines taken over, but they traveled back in time with the intention of wiping out those who posed an existential threat to their existence. While all this sounds very bleak and outlandish, who's to say that we're not actually spelling out our own demise with AI?

**How dangerous is AI really?**

Look at any newsfeed today, and you'll undoubtedly see some mention of AI. Deep machine learning is becoming the norm. Couple that with Moore's Law and the age of quantum computers that's undoubtedly upon us and it's clear that AI is right around the corner. But how dangerous is AI really? When it comes down to it, how can a connected network operating within the confines of laws that govern other organisms' survival actually be stopped?

While the birth of AI is surely a utilitarian quest in that our natural tendencies are to improve upon prior iterations of life through the advancement of technology, and that AI will clearly pave the way for a heightened speed of progress, is it also spelling out the end of all humanity? Is our species' hubris in crafting AI systems ultimately going be to blamed for its downfall when it occurs?

If all of this sounds like a doom-and-gloom scenario, it likely is. What's to stop AI when it's unleashed? Even if AI is confined to a set of rules, true autonomy can be likened to free will, one in which man or machine get to determine what is right or wrong. And what's to stop AI that lands in the hands of bad actors or secretive government regimes hell bent on doing harm to its enemies or the world?