My Top 5 Trends To Watch In AI

I researched the machine learning space for 3 months at OpenOcean

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Artificial Intelligence (AI) is considered by many the next industrial revolution and has naturally become a trendy buzzword, from Justin Timberlake's video at a 2028 Pan-Asian Deep Learning conferenceto SingularityNET's $36M ICO raised in 60 seconds, promising to create a decentralized AI market place using blockchain technology.

Skip this if you're already familiar with the reasons behind the current interest for AI and if you know broadly what is happening in the space. You can go straight to "I have listed …"

This is nothing new though. Artificial intelligence has been around since the 1800s with pioneers like Ada Lovelace. Some pinpoint its 'real' starting point in the summer of 1956 at Dartmouth College during the Summer Research Project on Artificial Intelligence. It has had many booms and busts since, called AI winters, usually because compelling demos would attract investments but wouldn't live up to their expectations in real life.

The current renewed interest for artificial intelligence comes from the research progresses made in machine learning and more specifically deep learning, diverging from previous efforts in logic and knowledge-based AI. This is thanks to better algorithms discovered, broad investments from governments, big companies and universities, exponential growth in computing performances and in amounts of labeled data and the open-sourcing of research (ie. arxiv, opensource datasets).

For those wondering what machine learning is, put simply it is the science of learning:

"A computer program is said to learn

from experience E with respect to some task T and some performance measure P, if its performance on T, as measured by P, improves with experience E." — Tom Mitchell, 1997

Deep learning is a subset of machine learning where the algorithm used to allow the machine to get better at some task is a neural network with many (hidden) layers. ('deep' because of many layers). You can have deep supervised learning, deep unsupervised learning, deep reinforcement learning and hybrids of these three used together. Further below I explain the basic distinction between these subsets of machine learning.

China for instance has committed $150 billion USD to AI in its five-year plan. As a comparison, the US spent $1.2 billion USD on unclassified AI programs in 2016. This information is to be taken with a pinch of salt given a lot of the AI funding in the US is from private companies and for classified programs.

On the other side of the Pacific, Canada has become an internationally renowned research hub for AI: it has a national AI strategy, leading universities, researchers and research labs. For example, last March the Vector Institute was founded, and received $150 million from the government and Canadian businesses. Its mission is to work with academic institutions, industry, start-ups, incubators and accelerators to advance AI research and drive the application, adoption and commercialization of AI technologies across Canada.

On the corporate front, titans like Google, Baidu, Facebook, Amazon, General Motors and many more are putting a big emphasis on AI in their strategies. They've gone as far as declaring it as their top priority and actively training individuals to short-circuit the shortage of talent in the industry by founding their own research labs, launching higher education programs like the Google Brain Residency and partnering with online courses platforms like Udacity.

I have listed below 5 trends in AI that I believe are worth looking into, some coming sooner than others. I have kept it short and am trying to pique your curiosity with quotes and facts.

Consider each point as a conversation starter

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