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Management of AI (Artificial Intelligence) projects

by Nikola Miloševi? - Monday, January 28, 2019

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Increasingly companies are nowadays going towards building systems that contain at least a part that is powered by Artificial Intelligence (AI). However, there is shortage of people who are experienced in managing such projects. Whether it is a system that utilizes natural language processing, computer vision or some sort of robotics, it is quite challenging to manage artificial intelligence projects. The main reason is that often people are approaching them as usual IT projects. However, AI projects are more complicated and can embed parts for which research is necessary. Higher managers often do not realize it and expect outputs that are similar to those of the IT systems. Often this puts inexperienced managers of AI systems in quite disadvantageous position.

Here are some of the challenges that AI system project face:

Mismatched expectations

By reading the news, people sometimes would think that anything is possible to be done using the AI. To the certain extent it may be even true. However, the most advanced AI systems come from the environments that are well funded and have quality and numerous manpower to execute these projects. On the other hand, some start-up managers would think that one AI engineer can solve all their problems, even though is not expert in the exact area they need him to solve the problems. This leads to mismatch of expectations. On one side AI engineers need to do research. The cost of the research and changes of directions and perspectives may seem unjustifiable to the managers who want the outcome as soon as possible in order to be able to make it to the market.

Inexperienced AI managers

Due to the shortage of staff in the field, it is sometimes hard to find the appropriate person to manage a team. Sometimes, ex IT managers start leading AI teams, or ex AI engineers would lead it. Probably, the second option would be better, in case the AI engineer had experience in well managed AI projects. On the other hand, IT manager have no idea what beast he is dealing with. He would treat it as IT project, that would just present him issues that are hardly solvable in some project management techniques. Agile may work in some cases, but whenever there is a longer term plan, that is the place where problems would start. Waterfall is hard to execute with this kind of projects. Experience with working both in software development and research projects would be beneficial to set it right.

Believing 5 engineers can compete with Google

Google is the biggest AI company in the world at the moment. It employs probably more than 1000 people working on AI from different perspectives. There are articles claiming that over 80% of AI engineers work for Google or Facebook. The number may be a bit exaggerated, but it is a big number. Often founders of startups think they can disrupt the market and even endanger those companies. However, bare in mind, these companies, even though managed to do disruption in the market, do AI research strategically. They would have enough manpower and brainpower, to catch up with anything and outperform it in some way. Therefore, pick your competition wisely.

Setting the right expectations

This can be related to the point of mismatched expectations, however, that point was more about time and work planning. This is more about performance. AI systems are good and help automate much. However, they sometimes make silly mistakes. No AI system ever made was 100% correct. Sometimes they are more consistent and more reliable than humans, but they would still make mistakes. Some of which are hardly predictable. Therefore, it is necessary to set expectations in front of engineers and scientists. These may be: What is acceptable levels of error? What kind of errors should be acceptable? And always one have to compare expectations with the-state-of-the-art. I am not saying that company would not move state-of-the-art, however, it is hard and those movements are often not so significant. Therefore, it is a good practice to see the evaluations of the available technologies and base assumptions on them.
