HOW TO MAKE ML/AI PROJECTS MORE SUCCESSFUL

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WHY DO MANY ML/AI PROJECTS FAIL?

Data science is vast and fast evolving. The machine learning algorithm used for the various problems has created many impactful solutions and outcomes but considering that companies have been finding it difficult to get results that they hoped for. Data science and machine learning are often referred to as the important part in an outcome that will unleash transformational forces that will propel companies to new heights.

Many organizations are not able to meet the unexpected difference occurring between the machine learning applications and study research. There are issues occurring related from the theoretical understanding and research happening in the AI world and actual implementation is causing a business gap between the expectations and the outcomes received. It is struggling to reconcile AI's transformative power with the realities that many AI projects will never produce results. There are multiple reasons leading onto this such as:

Lack of experienced data scientists

One of which could be the possibility of not enough expertise which is that more experienced data scientists can work on demanding complex machine learning problems then someone with less experience in the same field.

In a field like data science, the experience requirement is a combination of years of programming skills and statistics. And a highly skilled or experienced data scientist will give more accurate outcome . Someone who is inexperienced, could create a situation that would be a potential failure but hiring expert data scientist and machine learning engineers can be expensive for the finance side of the organization.

Lack of quality of processed data

In most cases, bigger datasets result into better prediction, but with large datasets more challenges come. In situations, when more data is created by adding external new data or the data acquired is unlabeled it leads to unknown complications therefore ultimately creating issues with outcomes such as the output being inaccurate resulting into misleading outcomes. Incorrectly labeled or unlabeled data or the unavailability of labeled can lead to major issues as when a project is being executed . As the experts must spend more time into solving and properly outsourcing their data from companies who are ready to work on larger datasets for the organization's requirement.

Varying business requirements & poor planning

In the start of a new project, it is important that the strategy is well discussed through the team properly before modeling or processing. Data mapping and data cleaning comes in secondary to strategizing. If critical and important project discussions are delayed or not taking place it could lead to issues in the development and analysis of the data. If there is lack of collaboration or improper communication, it can lead to missing expectations between the business and technical teams.

Before the initiation of project, one of the biggest data related issue is poor execution of team wide data plan which could occur due to varying business requirements neglected overtime.

IMPROVEMENT FOR THE SUCCESSFUL MODEL

Prioritize engineering over data science concentration:

As data science is relatively new, machine learning is still largely an untapped part of the

software and IT industry. A lot of AI projects work specifically under software-based applications such as coding for the data cleaning and preprocessing techniques. Therefore, from my understanding I believe that giving a software engineer a platform to be perform the coding part of a ML project and letting them self-learn the data science skills could prove to be quicker and more effective for acquiring desired outcomes out of a AI project. Therefore, seeking for data science enthusiast with adequate learning of the machine learning and an expert at software skills could truly contribute much more .

Pre-defined checkpoints that fit with organization's objectives

While undergoing of the project execution for the AI topic, it is most important that the to really understand the objectives being met with the requirement and values of the organization. But amongst which economic factor plays a vital role. As judging from the economic context, whether or not the by-products and its benefits aligns and equalizes with the risks and initial costs associated with the project. It is important for the project to be broken into small parts and analyzing overlying data related issues first than having to deal with something which is beyond repair towards the gearing end of the project.

FUTURE OF ARTIFICIAL INTELLIGENCE

The future of AI depends majorly on the adapting and emerging with best techniques to be able to narrow the gap between the present AI/ML projects and other engineering backgrounds. Technologies overtime have allowed us to experience serious breakthrough in ML applications and has developed overtime to change the face of the AI for which the main contributors are the birth of the internet leading to major data spikes and inventions occurring in the world of machines over the years. To understand the near-future scenario, we need to see as to where the future for AI and ML is heading towards which is AGI stands for real artificial general

intelligence which includes the function of speech recognition, computer vision etc. AGI holds the capabilities of slowly transitioning into super intelligence replacing real humans from their jobs or even surpassing the brain capabilities of all humans combined.

PASSION FOR AI

Deep learning is a part of AI I am passionate about. As Deep Learning something relatively new and still an emerging part of AI and ML it is slowly making its way to the popular list for experiments performed by AI enthusiasts. It is also slowly replacing human labor in all markets for which machines will be performing the designated tasks. Virtual assistants, vision for driverless/ autonomous cars, facial recognition and chatbots are all based of various deep learning techniques. AI holds the capability of replacing human brains in the future which is very intriguing for an AI enthusiast like myself.

ETHICAL AND SOCIAL IMPLICATIONS OF AI

Unemployment

AI is slowly but surely would have the impact of replacing human labor overtime which will lead to unemployment for people who are working for jobs which are easily replaced with machines for such as automatic cars which will transition into trucks as we speak of. And laborers will not be able to earn from their jobs as machines slowly makes way for replacing humans in all aspects of work life. AI is directly related to automation and the government should be able to fill the space in for people who work for simpler jobs and to be able to help them transition better for a globalized community in future.

Regulations on AI

Privacy invasion

The privacy of all people is at risk as AI is slowly taking over by data collection for every single minute. Virtual assistants are promised to not be breeching into privacy of the speakers but there is probability that overtime it will take over the information of speakers around. Just as advertisements work on social media platforms, where something that is talked or searched for in the internet is flashed as advertisement as cookies in web pages and social media platforms. If businesses and governments decide to make decisions based on the intelligence they gather about any person, it could develop into societal oppression as your information is used against you.

Positive Implication of Artificial Intelligence on Society

AI is acing towards improving the efficiency of all work environments as it can be really useful over a long period time saving time for humans to be able to use their time efficiently. It can truly improve and enhance healthcare industry by many folds by providing better medical facilities for hospitals and healthcare facilities through developed AI which could potentially be used in surgeries and personalizing drug prescriptions ultimately reducing production costs. AI is also making an exponential growth towards the autonomous car industry alongside its introduction towards developed crime investigations for the justice and police department is incredible. The future of AI can be geared towards the benefit of mankind, it only depends on ML enthusiasts as what they are gearing their researches and applications towards.

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