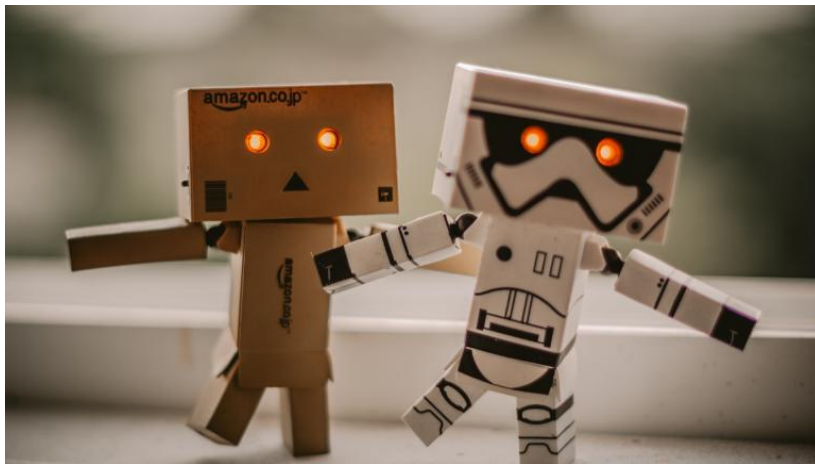


5 reasons why B-schools are teaching Artificial Intelligence (AI) and Machine Learning (ML)

Artificial intelligence (AI) and machine learning have become movers and shakers of the job industry today. Here's why business schools are teaching these skills to students.



Artificial Intelligence (AI) and machine learning (ML) are fast becoming must-learn skills in this digital age!

There is no doubt that Artificial Intelligence (AI) and Machine Learning (ML) are the two hot buzzwords right now. Examples of how AI and ML based disruptive practices are replacing traditional businesses on one hand while creating new business opportunities, on the other hand, are many. In a nutshell, AI is the broader concept of machines being able to carry out tasks in a 'smart' way while ML prescribes the set of such 'smart' rules that the computer figures itself out.

2 lakh new jobs coming up in Artificial Intelligence sector

It is no exaggeration to say the current and the future belongs to AI and ML. It is estimated that in USA, there are more than 10,000 positions available at top employers across the country and additionally, the country is estimated to have 2, 50,000 open data science jobs by 2024.

Elsewhere -- in EU, Canada and China -- the demand for AI related jobs are not only in high demand, they are a few notches above the median salary. India too is not far behind other countries in terms of AI

hiring. Some estimates expect a 60 per cent rise by this year due to increasing adoption of automation, and the related IT industry will require 50 per cent more workforces equipped with digital skills.



All this translates to around 2 lakh new jobs this year.

Educational institutes need to provide future AI employees

Obviously, where the demand is there, educational institutes are expected to be at the forefront in bridging the gap. The question is -- why are AI and ML finding its way into the B-school curriculum when it appears that AI and ML are still the forte of computer scientists, programmers and mathematicians? Almost all of the top 20 business schools in India are now offering specialisations in Business Analytics while some of them are offering specialisation tracks in AI ML.

The answer is evident if we closely inspect two things:

One - what does AI ML typically do or can do?

Two -- what are the expected roles of business schools?

Decision-making based on data inputs isn't anything new: Benefits of AI and ML

To understand what AI and ML bring, we must acknowledge that decision-making based on data inputs isn't new. Indeed, the traditional courses offered in B-schools related to decision sciences used computational algorithms as well as statistical models to solve problems. Most of these algorithms are over a century old. However, our getting to a solution was limited by the way we deemed fit to go about it. For example, logistic regressions, the favourite technique for many to solve binary classification

problems (problems that needed us to correctly predict one group from the other), required us not only to identify the factors but also how they must be related to each other.

Undiscovered and hidden patterns in the data eluded us. ML solved this by letting the algorithms learn on its own, from the data and from itself the best route to classify.

Thus, the various boosting models, ensemble techniques as well as neural network models connected dots in the data which improved upon the results traditional algorithms could not.



The second finesse AI and ML brought are the unstructured data. This is what defines them and has not only gives us additional insights, it helps us address and tackle issues which otherwise we struggled with. **We now solve traditional problems using data obtained from video cameras, speeches, texts,**

social media interactions, images, satellite images etc. We no longer need to only focus on historical data to gauge stock market sentiments, often analysing texts in shareholder reports gives us better accuracy. To estimate the footfalls in shopping malls, traditional survey methods are getting replaced by images of cars in car parks, to design agricultural forward contracts,



satellite images of agricultural plots provide invaluable information.

Simply put, AI and ML have allowed us to access, process and utilize data in an efficient way to solve complex problems - both traditional as well as those posed in the new ecosystem. This is where B-schools fit in, almost by design. B-school curriculums have always pride themselves for creating efficient decision

makers. Managers are expected to decide and then execute their decisions. Often, such decisions must be made based on limited data and experience and yet must be made quickly. **It is not surprising, therefore, that some of those decisions face ex-post criticism, and perhaps rightly so. Decisions based on AI-ML are likely to reduce such errors.**



For one, most of the unstructured data are not open to manipulations, and two, analysis based on that data reduces the human bias largely.

Artificial intelligence (AI) and machine learning have become must-learn skills that b-schools need to teach their students.

What is missing with AI and ML: the power of human intuition

However, there is an intrinsic part of human decision making that can't be separated -- intuition.

To a machine, a data is a set of numbers arranged in rows and columns where the column headings have no meaning! To a manager, the column headings are the most important. It is his training and experience that allows him to retain what is essential and cull out the rest.

Unlike a data scientist, whose journey with ML techniques is almost entirely about the column headings, he can trade-off accuracy for insight. For example, an ML technique may always pick up ethnicity of an individual to determine whether he is worthy of receiving a loan, but a manager can use insights to exclude ethnicity as it may violate some fundamental principles!

A successful AI ML programme in B-schools must ensure that this balance stays. Curriculums must focus on ML techniques complimenting the managerial decision and not substitute them.

While Indian business schools were reasonably slow in riding the business analytics wave, it appears they want to remain ahead of the AI ML curve this time.

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The article can be read online [here](#).