

TECHNOLOGY

Why Learn Machine Learning and Artificial Intelligence?

More and more skilled people are needed in businesses to use the data available and put it to better use



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Machine learning, artificial intelligence (ML & AI) and big data form up a new niche area that is seeing a fast-paced growth rate in India. To clarify terminologies for a layperson, AI is basically all about mimicking human intelligence in machines, ML is a sub-set of AI and is about techniques that enable these machines to continuously learn on their own through data and perform a desired set of processes. Big Data analytics is about extracting huge data and observing unanticipated patterns from the same, while ML uses the same to provide incremental data/information to help the machine learn on its own.

Some Statistics

Data science and big data industry in India is growing at 33per cent CAGR (Compounded annual growth rate) and stood at \$2.71 Billion in 2018. While the Finance & Banking industry leads the share in the analytics market, travel-hospitality and healthcare saw the fastest growth in recent years, in terms of analytics-use. ML-AI and Big Data are offering growth opportunities not just to established large businesses and employees but are becoming backbones of new-age, innovative startups. Startups employ 28per cent of analytics professionals and have created a huge impact in this area. The rate at which freshers are hired in the analytics industry increased by 33per cent in the year 2018; whereas about 40per cent of area-experts are below 5 years of experience. Delhi and Bengaluru lead the share in market size by revenue, followed by Mumbai, Hyderabad, Pune, Chennai and Kolkata in that order.

ML & AI techniques are very powerful and are already creating a ripple effect in the existing businesses; especially in startup-ecosystems across the globe. To help an uninitiated person relate with common examples when someone's Youtube, Netflix and Amazon accounts give him/her suggestion on what to watch next it's based on ML. When someone types search-keywords on google he/she gets suggestions to what to type and search that is also based on ML. Startups are coming up with innovative products and services aided by ML & AI. Food ordering apps are trying to predict most popular dishes pertaining to different geographies and seasons, improve delivery services, food quality, restaurant and dishes-listing; hospitality industry is trying to optimize discounts, increase room bookings and hence maximize revenues. The medical industry is trying to predict and diagnose risky health conditions with more precision. The application of data analytics is increasing incrementally by the day; so are the jobs that this area offers.

Big data analytics is another area that will see exponential growth in coming times; companies, entrepreneurs and researchers, in general, are scrapping data and using other methods and sources where the data is available, structured or unstructured, to find patterns in the data that was not really explored or anticipated till recent times. Earlier data analysts were constrained by conventional methods of extracting maximum information from minimum data that was available or rather used sampling techniques and also depended on hypothesis; However with big data, analysts can now use new techniques and multiple algorithms/models to find correlation between important variables and find better insights from much larger dataset that is available, without starting with a hypothesis. In big data, more emphasis is on correlation and patterns than causality. Businesses want to harness the power of ML-AI and Big Data to grow and profit exponentially. It is becoming a race that everyone is trying to win. Anyone who can help them is welcome and is sought after.

It is Getting Incrementally Multi-Disciplinary

The specialty of analytics area is that it is open to people from many different disciplines; those who can use their domain knowledge and apply analytics methods to come up with innovative solutions to transform the way business is done in their domain. The data can be of any nature i.e. text, numbers, images, video; the trick lies in how you exploit these to come up with useful insights. Many entrepreneurs are basing their business ideas on data analytics and related technologies. Consulting companies have not only helped businesses but have also been helping crime investigations. The problems that the data analysts are faced with every day are new and challenging. More and more

skilled people are needed in businesses to use the data available and put it to better use. Companies are working on the applied use of AI like building an algorithm for stock trading, Driver-less cars etc. The growth in the analytics area has made many prestigious management institutes introduce courses that are relevant to the analytics industry like Business intelligence, Business analytics with many subcategories like Marketing analytics, Financial analytics, HR analytics and so on.

Each institute claims to have industry relevant programme. Courses offered in analytics serve as an important stepping stone for people looking out for a career in that area. Any person interested in making a career in analytics and choosing a suitable course should understand the course curriculum, its currency, its application in the industry and employability earned by the end of the course. It is very important to stay up-to-date and learn new skills as no conventional degree, in this fast-developing world, is relevant for more than a time period of five years down the line. Analytics is one of the most futuristic avenues for jobs and more and more people are expected to expertise in this area in coming times.

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