Every student who goes to college or who is about to choose a stream to start his career hears these common terms like Artificial intelligence, Machine learning and the other stuff related to it. Artificial intelligence is not something new it has been present since the 1950s, so a technology which has been present for almost 65years with us, makes me wonder why in the era of the 21st century has seen such a huge spike in the investment and the usage of this technology. There are a lot of predictions being made that artificial intelligence and machine learning is the future, what is the reason for people to come to such huge conclusions and why is data the backbone of these two technologies. Lot of people have these questions in their mind but still they blindly suggest the younger generation or their peers to invest their time or money or work or any factor in this field without knowing the reason behind it. What has led to these circumstances, what has caused this transition everyone including me have this question in their mind. Recently I joined a data science program blindly, literally I didn’t know any implications of this course and I joined just because my peers and folks told me to do so. This started to get me think on what is artificial intelligence, what is machine learning and what do people mean by data science and deep learning. On doing some browsing I gathered some information which might not be right also but I’ll share it anyways. So let me give you a problem statement - imagine you are on your way back home from work or college so obviously you will have your mobile phone and you will tend to use it, by the time you reach home you would have used these four technologies that I had mentioned earlier. So this is how it begins you tend to go into any of the social media apps like facebook or instagram. We know that these companies out there are collecting huge amounts of data and this data is converted into revenue this is called as data science. So these companies using data science help you to build recommendation engines, and predicting user behavior, and much more. These things are only possible if you have enough amounts of data and on using various algorithms on this data can give us accurate results .The various things that we browse in social media apps and the recommendation searches are based on this implications. Each person has different recommendations because based on their recent searches a concept called prescriptive analytics in data science is used to give out results. So like how this is all done is the next query we all have, this is where artificial intelligence comes into play. Artificial intelligence is the ability that can be imparted to computers which enables machines to understand data, learn from the data, and make decisions based on patterns in the data i.e. A.I enables the machines to adjust their knowledge based on the inputs given by the user. But all these companies make sure that they have enough data for the Artificial intelligence to work and it is not possible to work on a small data lake. So teaching machines to work like humans is the concept of artificial intelligence. Machine learning is considered as subset of AI. This means that when we browse something that data is being fed to the machines using this dataset knowledge is applied on a new set of data and the output is received. That’s how new recommendations are shown in apps like YouTube, Netflix. Machines use methods like supervised learning, non-supervised learning, and semi-supervised learning to learn from these data. Let me just explain in brief on how it is done – so a dataset is provided to the machine ,the machine learns using any of the learning methods , after the learning part is completed the machine learnt model is tested on a piece of data which has not been encountered before and this is how the testing is done. But machine learning is mostly applicable when the dataset given is small, for enormous sets of data the concept used is called deep learning because in machine learning algorithms the output accuracy is very low but in deep learning the accuracy is high. That is why big companies take the machine learning route. For eg the virtual assistants like Alexa, Cortana, Google assistant use deep learning concepts to solve the queries raised by us. So these technologies are the background of all major tech giants that run in the world. This analysis is only a part of these concepts and there is a lot more to it, applications of these run all over the place. This is the reason for the sudden growth because this world requires luxury and this luxury has become our basic needs, in order to tackle this is the kind of technological setup we need to manage the needs of the people.