Future of Machine Learning

Machine learning is one of the most important developments in any industry. Although this **cutting-edge** technology has been around for decades, it is now becoming commercially viable. We are in an era where Machine Learning techniques are essentially used to give value to understand the hidden value of their data. But what about the future of Machine Learning? In this article, I will introduce some areas that we will see as the future of Machine Learning.

Integrated into Most Applications

Today, Machine Learning techniques are starting to become popular in a variety of environments. Companies are looking for Machine Learning techniques to help them anticipate the future and create competitive differentiation.

In the future, we'll start to see Machine Learning models embedded in almost any application and on a variety of devices, including mobile devices and IoT hubs. In many cases, users won't even know they are interacting with machine learning models.

Two examples where Machine Learning models are already built into everyday applications are retail websites and online advertisements. In either case, Machine Learning models are often used to provide a more personalized experience for users.

By Waqas Ali Munawar

Future of Machine Learning

Data Formed as a Service

One of the major obstacles to cognitive and machine development learning models involves training the data. Traditionally, **Data Scientists** had to take on the collection, labelling and training tasks on the data. Another approach is to use publicly available datasets or crowdsourcing tools to collect and label data. While the two approaches work, they take time and are complicated to execute.

To overcome these difficulties, several vendors will offer pre-trained data models. For example, a company can provide hundreds of thousands of pre-tagged medical images to help customers build an app that can help filter medical images and spot potential health issues.

Continuous Recycling of Models

Today, the majority of Machine Learning models are present offline. After deploying an offline model, the underlying model does not change because it is exposed to more data. The problem with offline models is that they assume that the incoming data will remain fairly consistent.

In the future of Machine Learning, we will see more Machine Learning models available. As these models are constantly updated with new data, the better the models will be in predictive analytics.

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Machine Learning as a Service

As the models and algorithms (that support Machine Learning) mature, we will see growing popularity of Machine Learning as a service. Machine Learning as a Service describes a variety of Machine Learning features delivered through cloud. A user typically uploads data to a vendor's cloud, and then Machine Learning calculation is processed in the cloud.

Automate Algorithm Selection

Data Scientists typically need to figure out how to use dozens of specific Machine Learning algorithms. Different algorithms are used for different types of data or different types of questions that we are trying to answer.

Selecting the best algorithm among many algorithms to perfectly train a Machine Learning model with great accuracy is not an easy task. A **Data Scientist** can try several different algorithms until they find the one that creates the best model. In the future of Machine Learning, we will witness something which we can use effectively to select the best algorithm automatically. By using automation, **Data Scientists** can quickly focus on one or two algorithms instead of manually testing many more. Additionally, this automation helps developers and analysts with less Machine Learning experience to work with Machine Learning algorithms.

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