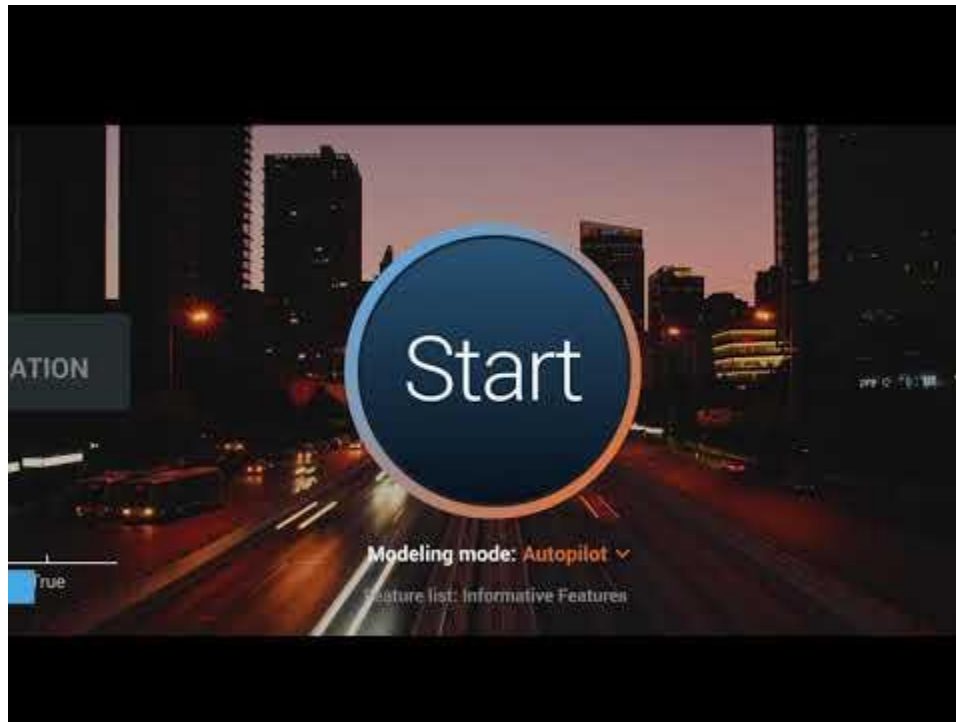


Module 2: Reading and Videos Part 3

Overview: Automated Machine Learning: (AML)

How valuable would it be to predict the winners of the Super bowl, World Series, The Grammys, or even political elections. A company called DataRobot an enterprise artificial intelligence platform using Automated Machine Learning did predict for all the winners of the 62 Grammy Awards.



Delivering accurate predictions can have significant implications for companies. How many apple iPhones will people buy next year? What motivates people to post on Instagram or communicate on Twitter? Why is customer loyalty so high for Amazon? How much will salespeople generate next quarter? Although these types of questions do not capture who will come out on top, they enable companies to anticipate results and how they can leverage these predictions in their decision making.

Automatic Machine Learning is mainly a supervised approach that explores and selects models using different algorithms and compares their predictive performance. It is a process that automates the task of developing analytical models with machine learning. When applied, AutoML has helped to overcome the shortage in advanced data analytics skills, enabling more businesses to benefit without the traditional manual approach of standard machine learning. Several of the new technology platforms automate the ultimate analysis process, support compared, and comparing predicted performance is enabled. Businesses of all sizes can now create accurate predictive models. Even though the process has some automatic features, users are still required to understand the underlying elements involved in developing this model.

When looking at and reporting the model's decision or recommendation, some questions may need to be asked including:

How was the data collected in prepared for analysis?

How did the model arrive at a particular conclusion?

What is the blueprint of this model?

Why did the model arrive at a particular conclusion?

What variables have the greatest impact on the predicted outcome?

What patterns exist in the data?

What are the reasons behind why the recommended model produced the most accurate decision?

Marketers need to remember that implementing AutoML does not replace human expertise. The AutoML perform is only capable of analytical discovery of relationships that actually or present in the dataset. Understanding the context of this data and ensuring that it means quality standards will result in the most effective models.

AutoML in Marketing

Companies using Salesforce CRM tools can then discover hidden insights in predict customer relationship outcomes so customers can better manage in real time. Salespeople are using the auto ML system can quickly develop lead scores for prospects, calculate the likelihood of sales for a customer, determine overall brand engagement, and assess the likelihood of closing a deal.

Data Preparation

There are four key steps in the auto ML process: 1. Preparing the data. 2. Building models. 3. Creating ensemble models. 4. Recommending models.

Success using of AutoML begins with data preparation. During model building tens of models are usually built automatically after the analyst specifies the dependent (continuous or categorical) variable of interest. AutoML uses preestablished modeling techniques that create access for anyone from beginners to data science experts at the click of the button. Sometimes the best approach is to combine different algorithms blending information from one then one model into a singular supermodel this type of model is referred to as ensembled model. It combines the most favorable elements from all models into a single model the process reduces issues such as noise, bias, and inconsistent or skewed variants that cause prediction problems. As a result, the ensembled model usually generates the best overall predictive performance. Although in a simple model offers several advantages is important to keep in mind that understanding how different variables have contributed to an outcome can be different. Model recommendations multiple perspective models are examined in the model with the most accurate predictions is recommended. Accuracy is it earned by observing how well a model and emphasize relationships and patterns in a data set and uses this knowledge to predict the outcome. Higher levels of accuracy are measured based on the better predictions of observations not in the original data set used to develop this model. The most accurate prediction models is the then used by companies to make better business decisions.