

Auto ML is the fact of simplifying data science projects by automating the machine learning tasks.

The machine learning process typically starts with raw data and ends with a predictive model that can be used to make decisions. This process usually includes the following steps:

1. **Data Gathering** to identify and collect input data.
2. **Data Cleansing** to standardize and clean the raw inputs.
3. **Feature Processing** to transform the input data into formats that can be easily processed to identify the best predictor variables.

This process is impractical without significant expertise and it can easily take statisticians weeks or months. Further, it requires frequent revision as new data becomes available.

AutoML = AI to Train AI

The primary goal of AutoML is to make machine learning easier to use by automating the entire process.

The obvious drawback of automated machine learning is that computers don't have the intuition of an experienced data scientist. However, AutoML addresses this with one major advantage – it can try many different things really quickly! By systematically testing a wide range of approaches, AutoML quickly builds powerful models that would have taken significant expertise and months of time to develop in the traditional way. The benefit is felt both at the initial deployment of ML, which sees a greatly improved timeline, as well as on an ongoing basis, as retraining of models can be done very quickly.

With respect to Interpretability:

Perhaps the largest impact can be felt by businesses with limited data science resources. AutoML enables non-statisticians to train, assess and deploy models in a way that simply wasn't possible before. Given the widely publicized shortage of data science talent, AutoML can play an important role in bridging the gap many businesses face between having data and being able to effectively make decisions with it.

With respect to Reproducibility:

Machine Learning is unlocking new sources of predictive power and can meaningfully impact decision accuracy. It has attracted a lot of attention in recent years as increases in data availability and computational power have made it more practical and valuable. AutoML is moving to the forefront of this revolution by making machine learning accessible to organizations of all sizes, leveling the playing fields between large and small companies and increasingly shaping the future of our economy.

Reference Links : <https://digifi.io/blog/introduction-to-automated-machine-learning-automl/>