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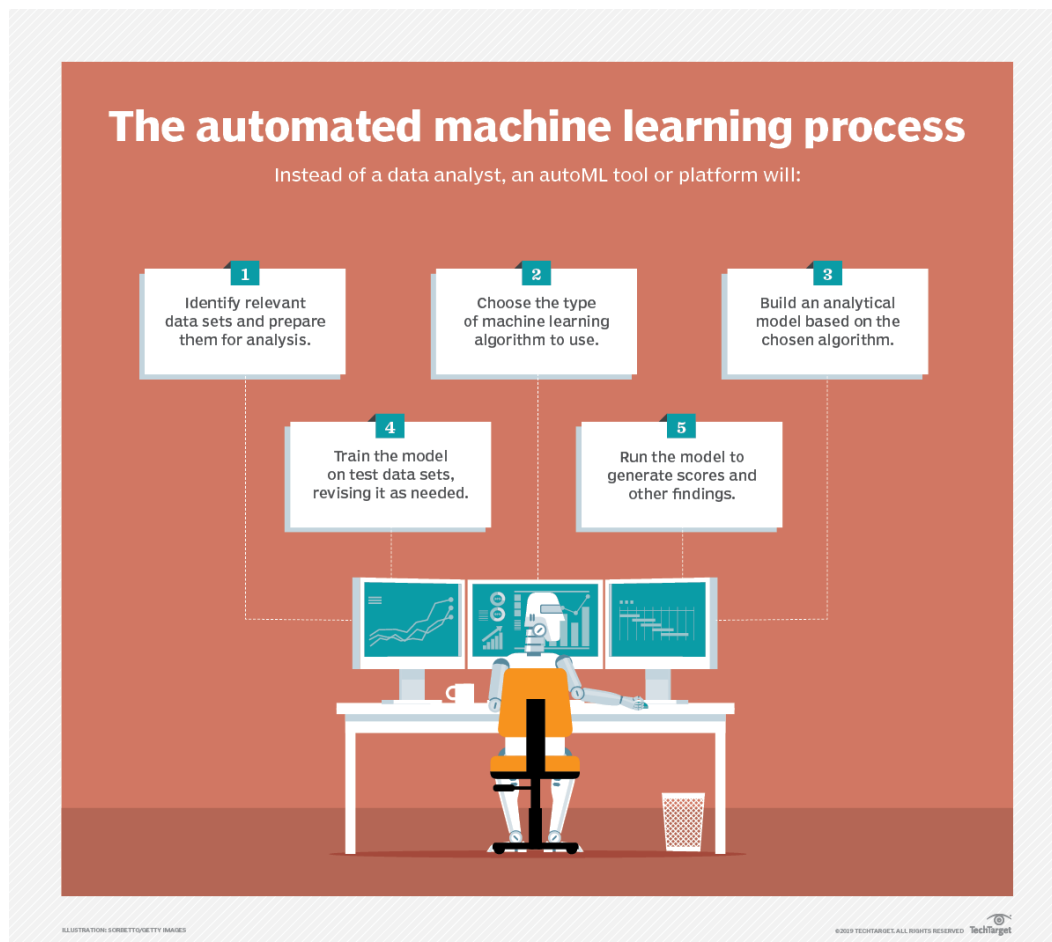
Location: Santiago, Chile.

Automated Machine Learning (Auto ML)

What is Auto ML?

Automated machine learning (Auto ML) is the process of applying machine learning (ML) models to real-world problems using automation. More specifically, it automates the **selection, composition and parameterization of ML models**. Automating the machine learning process makes it more user-friendly and often provides faster, more accurate outputs than hand-coded algorithms.

Auto ML software platforms make machine learning more user-friendly and give organizations without a specialized data scientist or ML expert access to machine learning. These platforms can be acquired from a third-party vendor, accessed through open source repositories such as GitHub or built in house.



How does the Auto ML process work?

Auto ML is typically a platform or open source library that simplifies each step in the machine learning process, from handling a raw data set to deploying a practical ML model. In traditional machine learning, models are developed by hand, and each step in the process must be handled separately.

Auto ML automatically locates and uses the optimal type of machine learning algorithm for a given task. It does this with two concepts:

- **Neural architecture search:** This automates the design of neural networks. It helps Auto ML models discover new architectures for problems that require them.
- **Transfer learning:** Pre-trained models apply what they've learned to new data sets. Transfer learning helps Auto ML apply existing architectures to new problems that require it.

Step to automatize

More specifically, here are **some steps** in the machine learning process that Auto ML can automate, in the order they occur:

- Raw data processing.
 - Feature engineering and feature selection.
 - Model selection.
 - Hyperparameter optimization and parameter optimization.
 - Deployment with consideration for business and technology constraints.
 - Evaluation metric selection.
 - Monitoring and problem checking.
 - Analysis of results.
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