BigML Workshop Objectives

Welcome to the BigML training workshop. The overall objective of this workshop is to give you a complete introduction to all of the features that BigML has to offer in a **practical hands-on** format.

This training is suitable for all skill levels and includes material suitable for everyone from absolute beginner to advanced practitioner. Laptops are required to complete the exercises that will be completed during the workshop.

At the completion of this training, you will prepared with everything you need to be successful with your own Machine Learning projects with BigML.

Topics covered include:

- What is Machine Learning, why and when is it needed.
- What kinds of machine learning tasks are there and how to use them effectively.
- Validating your machine learned models, and techniques to improve them.
- Collecting, transforming, and preparing data for machine learning.
- Deploying a machine learned model into a production system.
- Workflows that combine machine learned models to make real-world applications.
- Automating a machine learning workflow to maximize the time value of your data.

Supervised Learning

Supervised learning is a type of machine learning concerned with building models that can make predictions.

In this block you will learn:

- What is Machine Learning, why and when is it needed.
- How to evaluate machine learning models and to improve them.
- What kinds of supervised learning models are supported by BigML.
- How each algorithm works, specifically with regards to it's advantages or disadvantages.
- How to automate model selection and tuning for optimal performance.
- A real-world example explaining how to go from idea to outcome and the challenges of machine learning applications.

Unsupervised Learning

Unsupervised learning is a type of machine learning which makes working with unlabelled data possible and includes tasks such as clustering, anomaly detection, and association discovery.

In this block you will learn:

- What is unsupervised learning and why it is important.
- Which unsupervised alogrithms are available in BigML.
- How each algorithm works, specifically with regards to it's application and interpretation.
- Combining unsupervised methods into real-world application workflows.
- A real-world example explaining how to go from idea to outcome and the challenges of machine learning applications.

Advanced Machine Learning

Advanced Machine Learning is concerned with the skills required to solve real-world problems.

In this block you will learn:

- What is the format of Machine Learning ready data and how to get it.
- Dealing with missing values, errors, and otherwise messy real-world data.
- Engineering better features to improve or allow the success of machine learning tasks.
- Automating workflows with a client-side API or server-side WhizzML scripting language.


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