https://research.fb.com/the-facebook-field-guide-to-machine-learning-video-series/

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Introducing the Facebook Field Guide to Machine Learning video series

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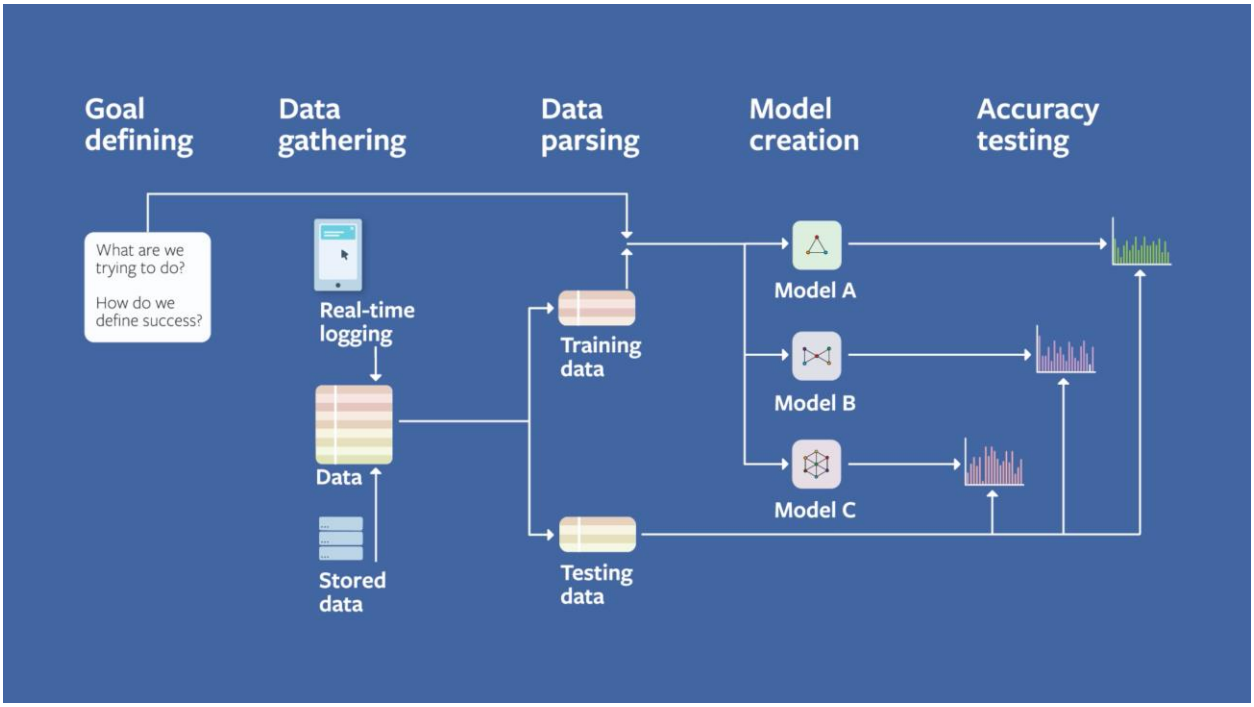

The Facebook Field Guide to Machine Learning *is a six-part video series developed by the Facebook ads machine learning team. The series shares best real-world practices and provides practical tips about how to apply machine-learning capabilities to real-world problems.*

Machine learning and artificial intelligence are in the headlines everywhere today, and there are many resources to teach you about how the algorithms work and demonstrations of the latest cutting-edge research.

However, if you're interested in using machine learning to enhance your product in the real world, it's important to understand how the entire development process works. It's not only what

happens during the training of your models, but everything that comes before and after, and how each step can either set you up for success or doom you to fail.

The Facebook ads machine learning team has developed a series of videos to help engineers and new researchers learn to apply their machine learning skills to real-world problems. The series breaks down the machine learning process into six steps:

1. Problem definition
2. Data
3. Evaluation
4. Features
5. Model
6. Experimentation

The video series covers each of these steps, explaining how the decisions you make along the way can help you successfully apply machine learning to your product or use case. Each lesson highlights examples and stories of non-obvious things that can be important in an applied setting.

We hope this video series will help you increase your knowledge of the machine learning process, the importance of making the right decisions at each step, and how using machine-learning models effectively can help deliver the business outcome you are trying to achieve.

Lesson 1: Problem definition

The first lesson, Problem definition, shares best practices about defining the problem. How the right set up is often more important than the choice of algorithm, and why a few hours spent at this stage in the process can save many weeks' work further downstream, preventing you from solving the wrong problem.

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Lesson 2: Data

In this lesson, you will learn how preparing the training data is a core part of a machine learning engineer's job. It's an active not passive part of machine learning research and is one of the most powerful variables to create high-quality machine learning systems.

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Lesson 3: Evaluation

Before jumping into developing more features and iterating on model architectures, it's important to have a clear plan for how to evaluate the performance of your model. This lesson covers how to evaluate your approach.

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Lesson 4: Features

In this fourth lesson of the Facebook Field Guide to Machine Learning, we focus on features. We explain examples of categorical, continuous and derived features and how to choose the right feature for the right model. We also cover areas to look out for such as changing features, feature breakage, leakage and coverage.

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Lesson 5: Model

If you've followed the four previous Facebook Field Guide to Machine Learning lessons carefully, this lesson on model should come fairly naturally. Your next job is to choose the right model for your data and find the algorithm to implement and train that model.

Lesson 5 offers tips about picking, tuning and comparing models, such as:

- How to pick a model
- How to tune a model
- How to compare models

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Lesson 6: Experimentation

In the last lesson of the Facebook Field Guide to Machine Learning series, we cover experimentation, or making your experiments actionable. One of the key topics is the difference between offline and online experimentation.

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Areas: Machine Learning