

# Overview

## A. Machine Learning in Industry

Machine learning has become one of the most important tools used in the tech industry. It powers everything from self-driving cars to virtual assistants. Nearly every company either has machine learning in their tech stack or is planning to incorporate machine learning in the near future.

Many people who have taken a college course or an online course in machine learning are surprised at how different the machine learning process is in industry. Very seldom in industry will people need to know much of the theory or mathematics behind machine learning; rather, the main focus is in applying existing algorithms and models to new problems and datasets.

Furthermore, the majority of work done by machine learning engineers in industry has nothing to do with actually building out machine learning models. Rather, most of the time spent on machine learning projects is in analyzing datasets, creating a data pipeline, and interpreting model results.

The purpose of case studies are to provide learners the chance to work on an actual use case in industry. In this case study we will walk through the industry machine learning process step by step: from initial data preprocessing of raw data all the way to simulated presentation for key decisionmakers.

## B. What this course will provide

After taking this course, you'll have completed a project akin to those assigned to industry machine learning engineers. Specifically, you will conduct the following:

- Process and analyze a real industry dataset.
- Understand the machine learning business problem and define a modeling strategy to solve it based on data analysis

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- Create an efficient data pipeline and develop a robust machine learning model for the regression task.
- Interpret model results with respect to the project domain and present the results in a business setting.