

# Machine Learning – get value out of your data

## Add machine learning to your toolbox

### Understanding the concepts of machine learning

Data is at the very core of all business decisions. Machine learning is therefore gaining increased attention as a tool for extracting crucial insights from data to make improved decisions that can ultimately ensure that your company stays ahead of competition.

During this course you'll get an introduction to the most common concepts and applications of Machine Learning. You will learn various supervised and unsupervised ML algorithms and prediction tasks which will be applied to different data. Additionally, this course will improve your ability to understand how you can choose the proper model for your data.

### Concepts within Machine Learning

Machine Learning has recently received a lot of attention and is being recognized as an important tool in terms of managing big data and building the AI applications of the future. Machine Learning models are increasingly implemented and today they are used to solve numerous problems ranging from predicting industrial machinery replacement to focusing cameras on mobile phones.

Machine learning makes it possible to build systems that improves with more data, which is fundamentally different from traditional rule-based programming. This course will allow you to recognize problems that are best approached with the concepts of machine learning.

The course will consist of several hands-on exercises where you can gain practical experience with training and evaluating machine learning models for a range of different problems. So, if you are working with large data sets, this course is relevant for you.

### Who can participate?

This course is an introductory course and therefore aimed at anyone who is curious to learn more about Machine Learning and searching for an understanding of simple yet effective Machine Learning tools.

Everyone can participate in the course, but the course has more relevance if you are already working with great amounts of data and want to learn how optimize the value from these.

Basic coding or scripting knowledge is required.

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## Benefits

### Once completing the course, you will be able to:

- Recognize and define business problems that could potentially be addressed with machine learning and artificial intelligence.
- Identify when machine learning can be used to explain specific behaviors and when it can be applied to predict future outcomes.
- Recognize how machine learning can be applied to numerical, text and image data.
- Clean and prepare data, perform Exploratory Data Analysis (EDA) and train classification models.
- Understand and identify the differences between some of the most implemented machine learning models.
- Evaluate a machine learning model and decide how to incorporate best practices.

### After this course, the organization will:

- Gain a sustainable competitive advantage by having employees with crucial machine learning knowledge.
- Be able to prepare for the future by attempting to collect data which is suitable for machine learning.



## Kursusoversigt

Dato	Sted	Modul	Overnatning	Ledighed
26. apr 2022	Scandic Sydhavnen, København SV	1 Modul	Nej	Ledige pladser
26. apr 2022	Tivoli Hotel, København V	1 Modul	Nej	Ledige pladser

Se opdaterede datoer og priser via linket nedenfor:

<https://www.mannaz.com/da/kurser-og-uddannelser/machine-learning/>

## Course agenda

The two-day course will vary between an instructor-led approach and hands-on exercises. The main areas of focus will be on providing the participants with the necessary knowledge and confidence to apply machine learning in their own work. The course will have a broad perspective on machine learning, but it will focus on classification tasks.

Participants are expected to bring their own laptop, but everything else is provided.

The hands-on exercises will be browser-based, so there is no requirement to install software, but participants should be willing to sign-up for a free Google account, if they do not have one already.

The course and course material will be conducted in English.

### Day 1

**09:00-16:00**

- Introduction to Machine Learning
- Supervised VS Unsupervised Learning
- Data preparation
- Classification
- Regression
- Overfitting
- Python, NumPy, Tensorflow
- Multilayer perceptron

### Day 2

**09:00-16:00**

- Working with natural language
- Bag of words

- Deep Learning
- Image recognition
- Training Neural networks
- Tips and tricks – How to come forward from here

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## Muniba Talha



Muniba Talha is an associate professor at Copenhagen School of Design and Technology (KEA) and an external lecturer Copenhagen Business School (CBS). Before entering this position, Muniba worked in Project and Team lead positions, where she delivered robust software products and developed agile teams.

Muniba is very passionate about lifelong learning, community building, diversity, and inclusion. She is the founder of Women in Data Science and Machine Learning, which is a community open to everyone with interest in this area. The community is focused on supporting and educating the women in the field of data science and machine learning.

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## This course is powered by IDA & Mannaz

Mannaz works in close collaboration with [IDA, The Danish Society of Engineers](#).

When you sign up for this course, Mannaz handles your registration, while IDA manages the course execution.

Your name, e-mail and telephone number will be passed on to IDA. The contact information is used exclusively in connection with the course.



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