

## Introduksjon til ML (del 2)

SOK-3023 (ML for økonomer), 5 ECTS

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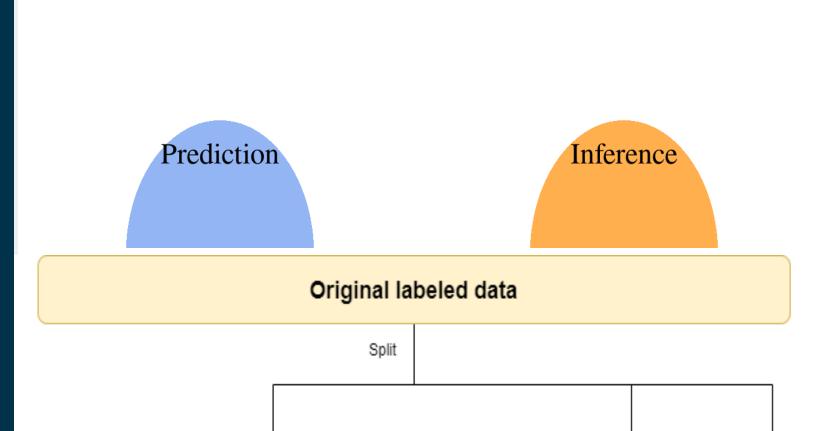
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# Fra sist gang

- Lineær algebra
  - Matriser, vektorer og tensorer
  - Data
  - Normer
- Kalkulus
  - Derivasjon
- Statistikk
  - Irreducible and reducible error
- Maskinlæring
  - Regresjon vs klassifikasjon
  - Prediksjon vs inferens
  - Overfitting/underfitting
  - Trenings-, validerings, og testsett



**Statistics** 

Validation

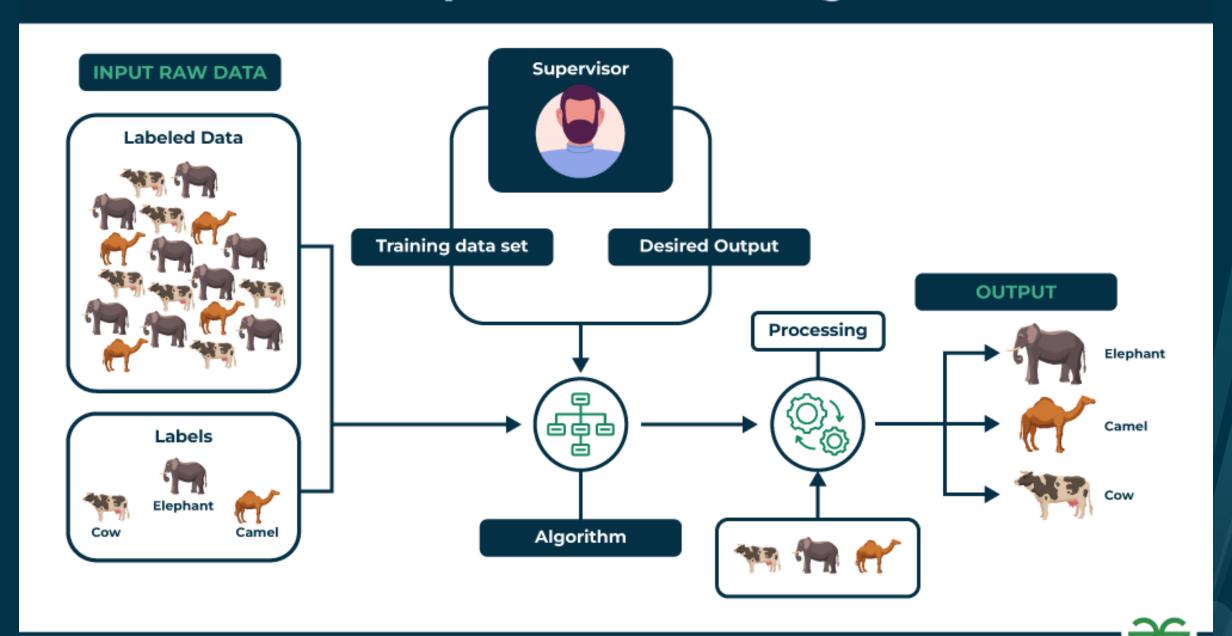
set

Test set

Machine Learning

Training set

## **Supervised Learning**



### ARTIFICIAL INTELLIGENCE

Any technique that enables computers to mimic human behavior



### MACHINE LEARNING

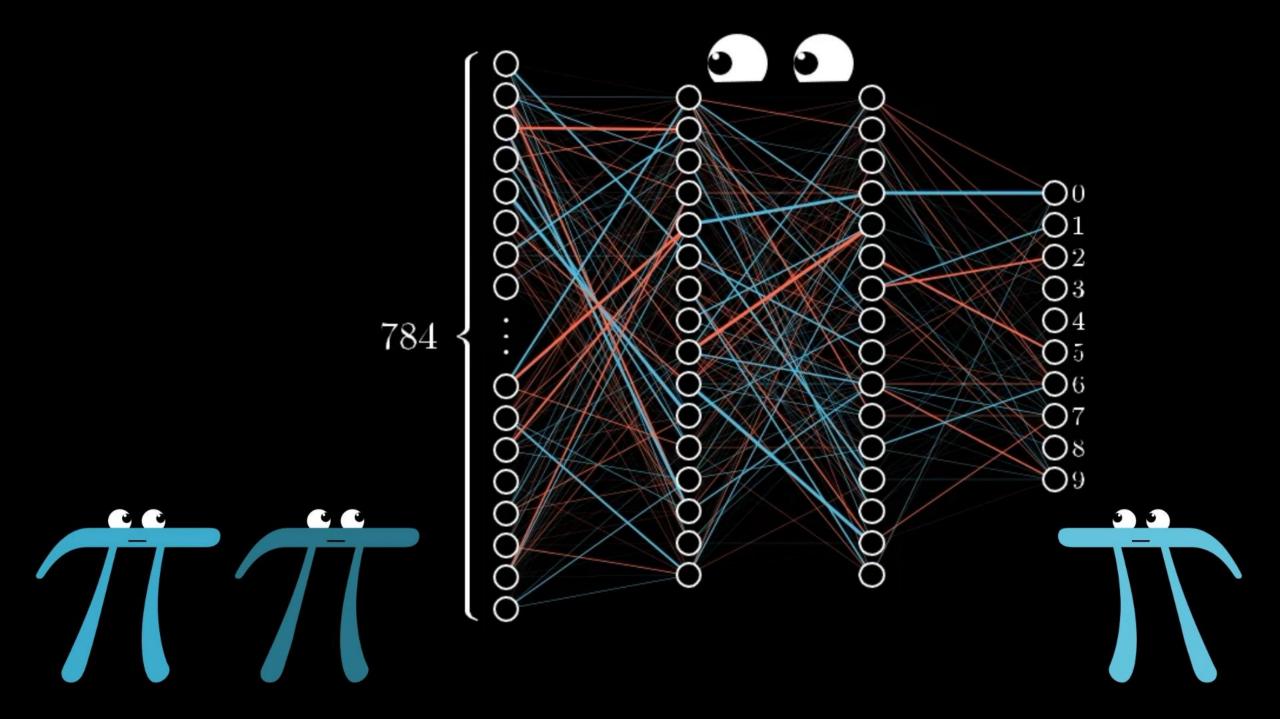
Ability to learn without explicitly being programmed

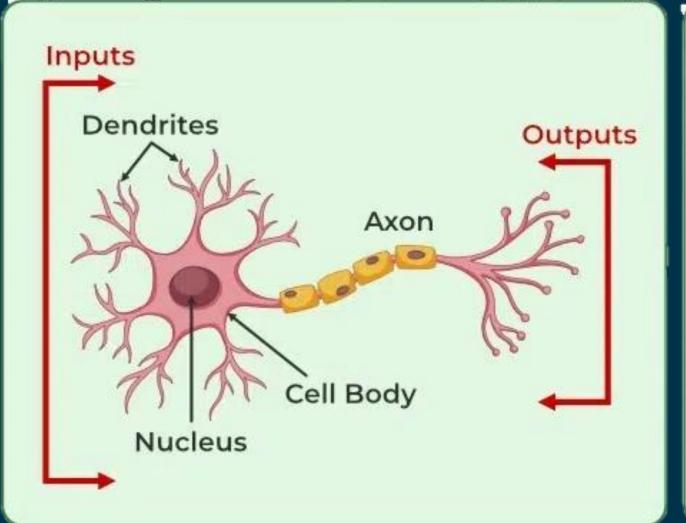


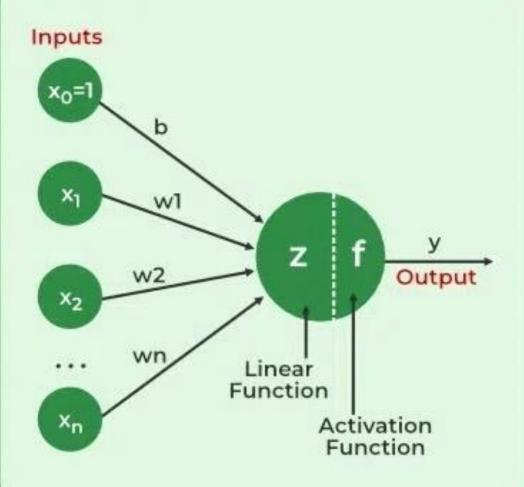
### DEEP LEARNING

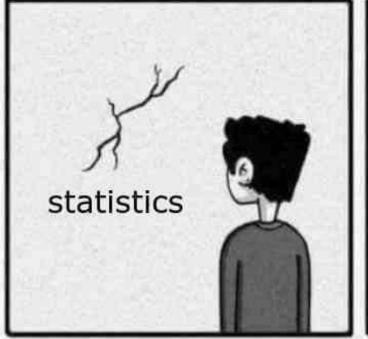
Extract patterns from data using neural networks

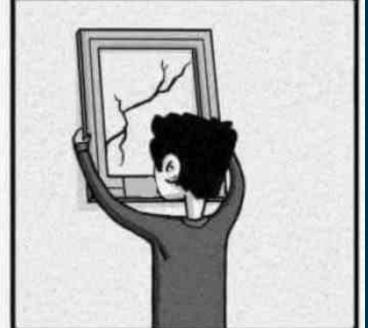
3 1 3 4 7 2

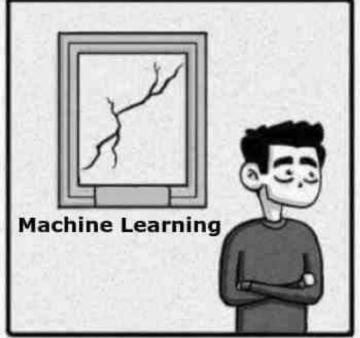


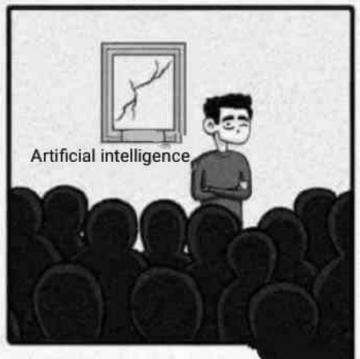












# Maskinlæringsteknikker

- I dette kurset fokuserer vi på *veiledet læring* (supervised learning).
- I kompendium'et dekkes teknikker som
  - Lineær regresjon
  - Logistisk regresjon
  - Beslutningstrær
    - Ensemble teknikker av trær

Selvstudium

## Bias-variance tradeoff