

## Machine Learning Models.

- Huge amount of Data.
- ML identify patterns in data.
- A model must be trained before it can use to predict.
- ML classes:
  - Supervised Learning.
  - Unsupervised Learning.
  - Reinforcement Learning.
- Supervised Learning (regression and classification problems)
  - Data is labeled and model trained to make correct predictions.
  - Regression: Predict real numerical values.
  - Classification: Classify things into categories.
- Unsupervised Learning.
  - The model analyse the data and identify patterns.
  - cluster and anomaly.
- Reinforcement.
  - Learns the best set of actions to take.

## Deep Learning.

- Emulate how the humans brain works.
- Applications: Natural Language Processing, image, audio and video analysis, time series forecasting.
- It requires a very large datasets.

## DL Models:

- You can build one
- Use pre-trained models.
- Built using: tensorflow - pyTorch - keras
- Popular model repositories.
  - Most frameworks provides a "model zoo"
  - ONNX.