

Lecture 1a

Neural Networks for Machine Learning

Why do we need machine learning

What is machine learning?

- it is very hard to write programs that solve problems like recognizing a three-dimensional object from a novel viewpoint in new lighting conditions in a cluttered scene.

bardzo trudno jest napisać programy rozwiązujące problemy takie jak rozpoznawanie trójwymiarowego obiektu z nowego punktu widzenia i nowych warunkach oświetleniowych w zagraconej scenie.

Ai niektórych przypadkach bardzo trudno jest napisać program

- We don't know what program to write because we don't know how it's done in our brain.
- Even if we had a good idea about how to do it the program might be horrendously complicated.

inny przykład:

- It is hard to write a program to compute the probability that a credit card transaction is ^{obliczyć} fraudulent ^{fałszywy}
- there may not be any rules that are both simple and ^{mierzalne} reliable
- We need to combine a very large number of weak rules. ^{złączyć}
- fraud is a moving target. The program needs to keep changing.