

Machine Learning Generals Script:

We've all heard about AI, Machine Learning, deep learning, neural networks and natural language processing. It's time to get to understand the basic concepts of it, and how they're interconnected.

AI

It's an attempt to make computers smart, or even smarter than human-beings. It's about giving computers human-like behaviours, thought process and reasoning abilities.

Narrow or Weak AI

That's the AI that is focused on a narrow task. Siri and Cortana are great examples of this AI, they are giving us the weather, but they have limits.

Siri can't read and delete your unimportant emails. It can't go beyond its original programming.

General or Strong AI

This is what we have seen in science fiction.

Samantha is the very definition of strong AI. She can learn new things and modify her own code base.

She can beat you in chess and drive a car.

AI Anatomy

Computers need senses in order to perceive, and can have more than human's five, like X-ray vision or Sonar detection.

Natural Language Processing

That's a hard task for computers in both spoken and written language, given how the same sentence can have different meanings depending on the context.

Machine Learning

Machine learning is a set of algorithms used to make a system "artificially intelligent," enabling it to recognize patterns from large datasets and apply the findings to new data.

Supervised Learning

This kind of learning is when you guide the Algorithm to the right answer by providing examples.

Unsupervised Learning

This kind of learning is when you let the algorithm find the right answer categorizing the data. No examples of right answers are provided.

Applying AI

It's better to have the best data to solve a specific problem or to be playing a different game. We feed data for training machine learning models that can create powerful network effects at scale.

Google has built their system around search data and ad clicks.

Facebook their newsfeed and social interaction data.

Amazon their product purchasing and recommendation data.

What separates a successful applied machine learning company is often the novelty, quality and/or quantity of the data they have access to.

Resources:

Book: Machine Learning An Algorithmic Perspective by Stephen Marsland

Course: <https://www.coursera.org/learn/machine-learning>

Challenge: https://www.tensorflow.org/get_started/mnist/beginners

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