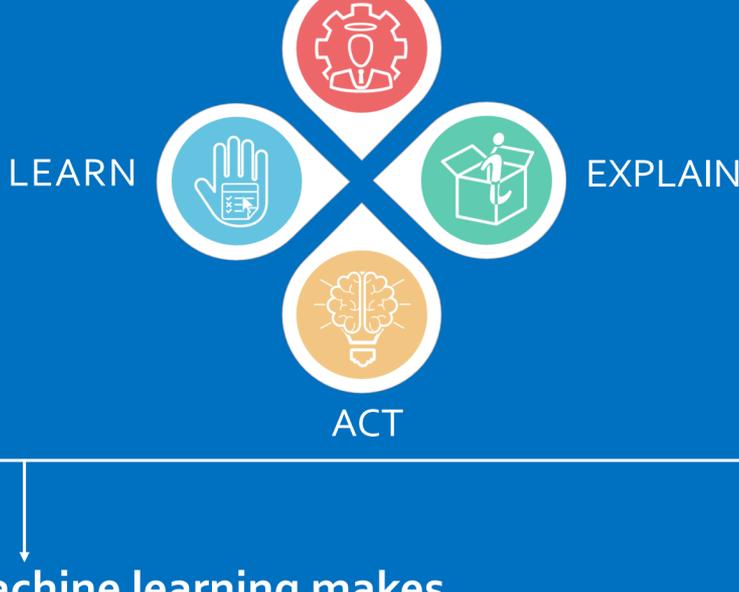


The 5-Minute Intro To Machine Learning

Machine Learning = a field of artificial intelligence that focuses on computer systems that automatically *learn, predict, act* and *explain* by using data.



Machine learning makes us superhuman



EXPLORE THE GALAXY – To explore distant planets, we send space-age rovers equipped with self-driving systems which continuously adapt to new unseen terrain. The ‘rules of the road’ which work on Earth don’t apply on Mars—there are no roads! Instead, machine learning enable vehicles like NASA’s Mars rover to self-drive without relying on predefined rulesets.



DISCOVER TREASURES ON EARTH – Isn’t it uncanny how Netflix knows just which movies to suggest? Or how Amazon seems to have your tastes so figured out? They both use recommendation systems based on machine learning which programmatically use people’s preference data and your behavioral history to derive increasingly accurate suggestions for you. Machine learning is especially useful when dealing with large, fast-changing data sets.



SAVE US FROM SPAM – We all hate spam. Imagine how much worse our email inboxes would look each day if data scientists hadn’t figured out a way to weed out junk mail. Machine learning powers spam filters used by all commercial email providers. Because spammers are always seeking new ways to outsmart the systems, machine learning enables rapid response and adaptation to new spam infiltration tactics.



DETECT DISEASE - IBM’s Watson is arguably the most famous example of artificial intelligence and is what most people would think of when envisioning a machine that can learn. Besides beating Jeopardy contestants, Watson helps doctors detect and diagnose diseases such as cancer. Watson, paired with doctors, become the ultimate intuition machine and can make better predictions together.



KEEP COMMERCE SAFE - Fraud drives up the cost of doing business for everybody, not just big companies. But by using machine learning in fraud detection engines, companies can detect bad transactions faster and with greater accuracy than with other methods. Feedzai uses machine learning to catch patterns of fraud that were previously impossible to detect manually. In fact, our machine models detect fraud 61% better than traditional methods. By not relying on predefined rules, Feedzai’s fraud detection technology responds more quickly to threats, saving everyone time and money.

Rise of the Machine A brief history of artificial intelligence

- 2014** Feedzai machines automatically make 60 billion decisions per day to knock out payment fraud.
- 2011** IBM’s Watson supercomputer wins Jeopardy gameshow.
- 1997** IBM’s Deep Blue computer beats Gary Kasparov at chess.
- 1966** Joseph Weizenbaum, a German computer scientist working at MIT, creates a natural-language processing program called ELIZA. ELIZA was capable of participating in simple conversations with humans.
- 1951** British computer scientist Christopher Strachey writes the first successful artificial intelligence program that could play a complete game of checkers at a reasonable speed.
- 1912** El Ajedrecista, also known as the Chess Player machine and built by Spanish engineer and mathematician Leonardo Torres y Quevedo, is considered the first computer game in history.

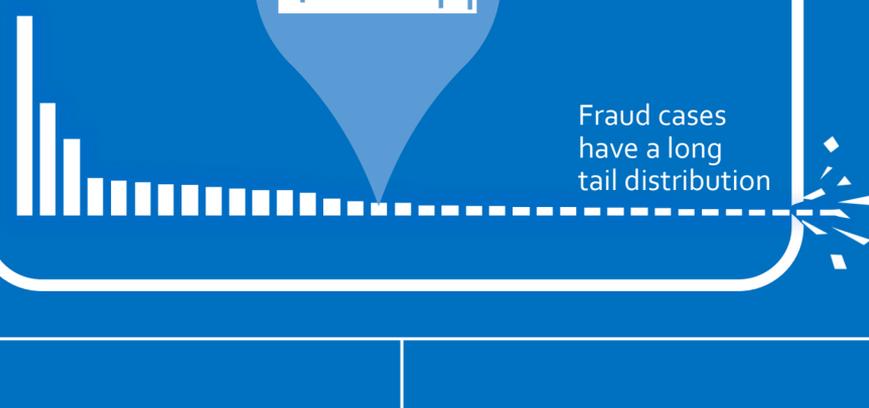
Why machine learning for fraud prevention?

Machine learning models scale to fit nuances of your customers

Professional adversaries use sophisticated machine-based attacks

Human-generated rules penalize good customers

Fraud patterns are spiky & change quickly



5 Elements of modern machine learning

Automatic
Continuously adapting to new fraud patterns.

Understandable
White-box explanations for everyday analysts.

Easy To Use
Democratizing access to advanced statistical learning.

Big-Data Scale
In-memory, distributed streaming technology.

Omnichannel
Make commerce safe, online or in-store.