→ What is Machine Learning?

Arthur Samuel (1959) Machine Learning: Field of Study that gives computers the ability to learn without being explicitly programmed.
(Bilgisayarların açıkça programlanmadan öğrenme yeteneği veren Çalışma alanı)

Tom Mitchell (1998): well-posed Learning Problem: A computer program is said to learn from experience E with respect to some task T and some performance measure P, if its performance on T, as measured by P, improves with experience E.
(Bu bilgisayar programının, P ile ölçülen T üzerindeki performansı, deneyim E ile iyileşirse, bazı görev T ve bazı performans ölçütleri P ile ilgili olarak E deneyiminden öğrendiği söylenir.)

Task T → playing checkers (dama oynama)
Performance measure P → The probability that wins the next game of checkers against some new opponent (rakip)

Exp: Suppose your e-mail program watches which emails you do or do not mark as spam, and based on that learns how to better filter spam. What is the task T in this setting?

→ ✓ classifying emails as spam or not spam.
o   watching you label ① emails as spam or not spam,
o   The number (or fraction) of emails correctly classified as spam
o   None of the above – this is not a machine learning problem   / not spam ②

① → Experience E
② → Measure P

Machine Learning Algorithms:
- Supervised Learning: (Denetimli öğrenme)
- Unsupervised Learning (Denetimsiz öğrenme)

others: Reinforcement learning , Recommender systems
(pekiştirme, güçlendirme, takviye...) (Tavsiye sistemleri)

Also talk about: Practical advice for applying learning algorithms.