

Question: Machine Learning

Describe in your own words what is meant by the term machine learning. Express the different problems to be solved.

Machine learning is the intersection between theoretically sound computer science and practically noisy data. Essentially, it's about machines making sense out of data in much the same way that humans do.

Machine learning is a type of artificial intelligence whereby, an algorithm or method will extract patterns out of data. generally speaking, there are a few problems machine learning tackles; these are

- 1) Fitting some data to a function or function approximation (supervised)
- 2) Figuring out what the data is without any feedback (unsupervised)
- 3) Playing a game with rewards and payoffs (Reinforcement learning)

can you give an example with the three letters (T, E, P) we learned from ML? (Example SPAM)

- A computer program is said to "learn" from experience E with respect to some class of tasks T and Performance measure P , if its performance at task in T , as measured by P , improves with experience E

- Task = Categorize email messages as spam or legitimate
- P = Percentage of email messages correctly classified
- E = Database of emails, some with human-given labels.