Mitchell ( 1997 ) definition:

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 tasks in **T**, as measured by **P** , improves with experience **E**.

Suppose your email 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.

. Watching you label emails as spam or not spam.

. The number (or fraction) of emails correctly classified as spam/not spam.

. None, this is not a machine learning problem

T := Classifying emails as spam or not spam.

E := Watching you label emails as spam or not spam.

P := The number (or fraction) of emails correctly classified as spam/not spam.