

## How limited the Machine Learning generalization is?

In popular articles, it's common to see machine learning programs described in terms of how children learn, but that can be a terribly misleading way to think about things. How well the QuAM (Question answering machine) generalizes has more to do with thorough testing than the computer actually knowing anything.

More formally, generalization is limited by two things. First, by the examples the system has to learn from or the data you feed it, and second, generalization is limited by the learning algorithm itself because different learning algorithms produce different kinds of QuAMs, and different kinds of QuAMs can capture different kinds of knowledge.

The generalization of a QuAM depends on how well can it make predictions on out of sample data not how well it fits the training data. Over-fitting or under-fitting in a machine learning model affects the prediction making hugely.

- ▼ Related Course/Tutorial Name
  - Machine Learning: Algorithms in the Real World Specialization, C01 -Introduction to Applied Machine Learning