

Week 1

Quiz 1

Ques1. 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. Suppose we feed a learning algorithm a lot of historical weather data, and have it learn to predict weather. What would be a reasonable choice for P?

Answer: The probability of it correctly predicting a future date's weather.

Ques2. The amount of rain that falls in a day is usually measured in either millimeters (mm) or inches. Suppose you use a learning algorithm to predict how much rain will fall tomorrow. Would you treat this as a classification or a regression problem?

Answer: Regression

Ques3. Suppose you are working on stock market prediction. You would like to predict whether or not a certain company will declare bankruptcy within the next 7 days (by training on data of similar companies that had previously been at risk of bankruptcy). Would you treat this as a classification or a regression problem?

Answer: Classification

Ques4. Some of the problems below are best addressed using a supervised learning algorithm, and the others with an unsupervised learning algorithm. Which of the following would you apply supervised learning to? (Select all that apply.) In each case, assume some appropriate dataset is available for your algorithm to learn from.

Answer: Given genetic (DNA) data from a person, predict the odds of him/her developing diabetes over the next 10 years.

Ques5. Which of these is a reasonable definition of machine learning?

Answer: Machine learning is the field of study that gives computers the ability to learn without being explicitly programmed.