Introduction

5 questions

1 point

1.

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?

- The process of the algorithm examining a large amount of historical weather data.
- The probability of it correctly predicting a future date's weather.
- The weather prediction task.
- None of these.

1 point

2.

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?

- ○ Regression
- ● Classification

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1 point

3.

Suppose you are working on stock market prediction, Typically

tens of millions of shares of Microsoft stock are traded

(i.e., bought/sold) each day. You would like to predict the

number of Microsoft shares that will be traded tomorrow.

Would you treat this as a classification or a regression problem?

- ● Classification
- ○ Regression

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1 point

4.

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.

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

- [ ] Examine a large collection of emails that are known to be spam email, to discover if there are sub-types of spam mail.
- [ ] Take a collection of 1000 essays written on the US Economy, and find a way to automatically group these essays into a small number of groups of essays that are somehow "similar" or "related".
- [ ] Examine the statistics of two football teams, and predicting which team will win tomorrow's match (given historical data of teams' wins/losses to learn from).

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1 point

5.
Which of these is a reasonable definition of machine learning?

- ○ Machine learning is the field of study that gives computers the ability to learn without being explicitly programmed.
- ○ Machine learning learns from labeled data.
- ○ Machine learning is the field of allowing robots to act intelligently.
- ○ Machine learning is the science of programming computers.

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