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| **Probability & Statistics** | 141 |

1. Which of the following is an explainability risk of self-learning models?   **1 / 1 point**

   ○ Self-learning models can corrupt data or otherwise make it unreadable.

   ○ Self-learning models are unable to generate decisions as output.

   ○ Self-learning models are black boxes whose decisions cannot be understood.

   ◉ Self-learning models may introduce new data you're unaware of.

   > ✓ **Correct**
   > Self-learning models may ingest new data, like new features, without your knowledge. This can make the process more complex and difficult to understand.

2. Which of the following is a transparency risk of closed source software?   **1 / 1 point**

   ○ Closed source software cannot be reviewed by the organization that developed it.

   ○ Closed source software cannot be shared with business partners.

   ○ Closed source software includes obfuscated code that cannot be read by a human.

   ◉ Closed source software may not be accessible to independent auditors.

   > ✓ **Correct**
   > Because closed source software is not open to the public, the public cannot easily audit the code, which is an important step in ensuring transparency.

3. A disruptive user on a social media site is subjected to a shadow ban. Which of the following might be an indication of that shadow ban?   **1 / 1 point**

   ○ A user logs in one day to find that they have been asked to discontinue their disruptive behavior, or they will be banned.

   ◉ A user logs in one day to find that they are able to post, but receive no direct responses.

○ A user logs in one day to find that their posting privileges have been revoked.

○ A user logs in one day to find a message from a site administrator saying that the user has been banned.

✓ **Correct**

In a shadow ban, the user uses the site as they normally would, but they are unaware that they have been isolated from the rest of the site.

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4. Which of the following is an effort to turn black box AI models into models whose decisions are easier to understand?

1 / 1 point

○ Self-learning models

○ Neural networks

⦿ Explainable AI

○ Human-in-the-loop

✓ **Correct**

Explainable AI attempts to make the decisions of a typically black box model easier for a human to understand.

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5. You want to solicit feedback from users who are seeking explanations about your AI products and services. So, you decide to place a form on your marketing website that users can fill out. Which of the following is the best way to structure that form for the purpose of collecting useful feedback?

1 / 1 point

○ Provide a series of open questions with a single-line entry field where users can provide short answers.

○ Provide a drop-down menu of feedback categories that users can select from, with a promise that you'll follow up via email.

⦿ Provide a large, unrestricted text box where users can enter their thoughts at length.

○ Provide a series of yes or no questions with radio buttons where users select their respective answers.

✓ **Correct**

By enabling users to write their thoughts without too much restriction, you'll likely receive more thoughtful and useful feedback.

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6. You're the recipient of some data collected by a third party that you'll use in training an AI model. As per your business agreement, the third-party discloser of the data requests that you explain how you plan to use the data. At what point in the process should you provide this explanation?

1 / 1 point

○ At the point of evaluating the model.

⦿ At the point of collecting the data.

○ At the point of planning the AI system.

○ At the point of training the model.

✓ **Correct**

This ensures that your intentions will be clear before you start using the data.

7. Which of the following are potential training data inadequacies that you should communicate to your users in support of transparency? (Select two.)

☐ The amount of time it took to collect the data.

☑ Any known bias in the sample data.

> ✓ **Correct**
> Bias is a significant concern to users since it can negatively affect the usefulness or fairness of a model. Therefore, users should be made aware of such bias.

☐ The relatively large size of a dataset used in training.

☑ Any missing values in the dataset and how they were handled.

> ✓ **Correct**
> Missing values can negatively impact the effectiveness of a model, which can lead to inadequacies that users should be aware of. How you handled these values is also of interest, since it likewise affects the model.

1 / 1 point

8. Which of the following is a technique used by the Python tool Alibi to produce a subset of features that will usually result in the same model prediction?

○ Local Interpretable Model-Agnostic Explanations

○ Shapley value

◉ Anchor Explanations

○ Perturbation

> ✓ **Correct**
> Alibi uses Anchor Explanations to produce this subset of features to help explain model decisions.

1 / 1 point

9. Which of the following Python tools is designed to integrate with Google's Cloud AI platform?

○ ELI5

○ LIME

○ SHAP

◉ What-If

> ✓ **Correct**
> The What-If tool was developed by Google and is meant to integrate with its Cloud AI platform.

1 / 1 point

10. Which of the following are typically true when comparing the LIME tool with the SHAP tool? (Select two.)

☑ LIME outputs results faster than SHAP.

> ✓ **Correct**
> One of LIME's advantages is that its results are typically generated faster than SHAP's.

☑ LIME is less accurate than SHAP.

1 / 1 point

✓ **Correct**
One of LIME's tradeoffs is that its results are potentially less accurate than SHAP's.

☐ LIME supports fewer types of models than SHAP.

☐ LIME supports more programming languages than SHAP.