Congratulations! You passed!

TO PASS 70% or higher

Keep Learning

GRADE 100%

Phase 1. Project 2

LATEST SUBMISSION GRADE

100%

1. How can we represent a patient's electronic health record, a form of structured data, to a machine learning model? **1 / 1 point**

- ○ As layers of number grids, where each number is pixel intensity
- ○ As a sequence of 1-dimensional vectors, where each number is pixel intensity
- ◉ As a 1-dimensional vector, where each number is a hand-picked feature
- ○ As a 1-dimensional vector, where each number is pixel intensity

Correct

Because the lab-values and observed symptoms are easily represented numerically, we can create a feature vector using these numbers.

Phase 1. Project 2
Graded Quiz • 30 min
Due Mar 15, 2:59 PM CST

- ☐ A regression model that predicts the patient's date of death.
- ☑ A model that predicts what range of days it will take for a patient to require invasive mechanical ventilation. The 4 categories include: ["0-4 days", "5-9 days", "10-14 days", "14+ days or will not need one"]

Correct

A model trained in this way would be trained on multiclass classification, but would still predict the need for intubation based on the given features.

- ☐ A binary classification model that predicts whether or not the patient will require hospitalization.
- ☑ A model that predicts the number of days before a patient requires invasive mechanical ventilation. This model would be trained only on patients who required invasive mechanical ventilation.

Correct

A model trained in this way would be a regression model, but would still predict the need for intubation based on the given features.

3. Given that we are training a model to predict whether or not the patient requires invasive mechanical ventilation, which of these values should NOT be passed into the model as a feature? **Check all that apply**. **1 / 1 point**

- ☑ Ventilator setting

Correct

Ventilator setting requires knowledge that the patient required intubation, therefore this is NOT an acceptable feature for the model.

Phase 1. Project 2
Graded Quiz • 30 min
Due Mar 15, 2:59 PM CST

Correct

Phase 1. Project 2
Graded Quiz • 30 min
Due Mar 15, 2:59 PM CST

- ☐ Patient inpatient arrival date
- ☐ Ferritin
- ☐ Patient birth date
- ☐ White Blood Cell count
- ☐ D-DIMER

4. Imagine the path that the patient data took through the healthcare system. What are some possible errors that might have gotten introduced to the data before it was published? **Check all that apply**. **1 / 1 point**

- ☑ The patient comes to ED and gets immediately intubated, thus no labs are provided

Correct

Such a patient will not have lab values, therefore the model is unlikely to work well in such a scenario.

- ☑ The patient was a recent transfer from another system

Correct

Such a patient may not have complete medical records, which may limit the model's performance, particularly if the model relies on historical data.

- ☑ Labs are logged AFTER the invasive mechanical ventilation

Correct

Such a patient will have lab values that may not correlate with the FUTURE need for ventilation, therefore the model may be learning irrelevant patterns from such data.