2020-2021 1-GS Methods in AI research (INFOMAIR)
Announcements
Dashboard
Staff Information
Course Information
Course Schedule
Course Content (lecture slides etc.)
Team Project
Questionnaire and submitting project deliverables
My Grades

Review Test Submission: Quiz Lectures 2 and 3.

User	Otto Mättas
Course	2020-2021 1-GS Methods in AI research (INFOMAIR)
Test	Quiz Lectures 2 and 3.
Started	9/8/20 11:39 AM
Submitted	9/8/20 12:48 PM
Due Date	9/9/20 4:00 PM
Status	Needs Grading
Attempt Score	Grade not available.
Time Elapsed	1 hour, 8 minutes
Results Displayed	All Answers, Submitted Answers, Correct Answers, Feedback, Incorrectly Answered Questions

Question 1

Needs Grading

Let's say you work at a bank. You're asked to make a system to detect whether a credit card transaction is fraudulent or genuine.

What kind of features would you use? List at least 5 features.

Selected Answer: * transaction sum
* transaction timestamp
* transaction (IP) location
* time between transactions
* difference in locations between transactions

Correct Answer: We'll return to this in the live session.

Response Feedback: [None Given]

Question 2

10 out of 10 points

What is the entropy of the following distribution:

Y=0 with p=0.30

Y=1 with p=0.70

Provide your answer with two digits after the decimal point.

Use log2 when calculating your answer.

Selected Answer: 0.88

Correct Answer: 0.88

Answer range +/- 0 (0.88 - 0.88)

Response Feedback: Correct!

-(3/10) log2 (3/10) – (7/10) log2 (7/10) = 0.88

Question 3

10 out of 10 points

A decision tree with a depth of 5 will never has higher training error than a tree with a depth of 2.

Selected Answer: True

Answers: True
False

Response Feedback: Correct! Growing a tree will never increase its training error.

Question 4

10 out of 10 points

A decision tree with depth of 5 will never has higher test error than a tree with a depth of 2.

Selected Answer: False

Answers: True
False

Response Feedback: Correct! The deeper decision tree may overfit on the data and have a higher test error than the decision tree with depth 2.

Question 5

10 out of 10 points

You have the following dataset with 5 instances. You have a classifier that always predicts the label "A". What is the accuracy of this classifier? (provide a value between 0 and 1 (inclusive))

Label	Feature 1	Feature 2	Feature 3
A	0.5	1	0
B	-0.1	1	0
A	0.2	0	1
A	0.3	0	0
B	-0.2	1	1

Selected Answer: 0.6

Correct Answer: 0.6

Answer range +/- 0 (0.6 - 0.6)

Response Feedback: Correct! 3 (number of correct instances) / 5 (total number of instances) = 0.60

Question 6

10 out of 10 points

You have the following dataset with 5 instances. You have a classifier that always predicts the label "A". What is the precision of this classifier for class A? (provide a value between 0 and 1 (inclusive))

Note that it's the same setting as in the previous question.

Label	Feature 1	Feature 2	Feature 3
A	0.5	1	0
B	-0.1	1	0
A	0.2	0	1
A	0.3	0	0
B	-0.2	1	1

Selected Answer: 0.6

Correct Answer: 0.6

Answer range +/- 0 (0.6 - 0.6)

Response Feedback: Correct! 3 (number of correct instances predicted to be A) / 5 (total number of instances predicted to be A) = 0.60

Question 7

0 out of 10 points

You have the following dataset with 5 instances. You have a classifier that always predicts the label "A". What is the recall of this classifier for class A? (provide a value between 0 and 1 (inclusive))

Note that it's the same setting as in the previous question.

Label	Feature 1	Feature 2	Feature 3
A	0.5	1	0
B	-0.1	1	0
A	0.2	0	1
A	0.3	0	0
B	-0.2	1	1

Selected Answer: 0.6

Correct Answer: 1

Answer range +/- 0 (1 - 1)

Response Feedback: Incorrect! All instances that are "A" are classified as "A", so the recall is 1.

Question 8

Needs Grading

Provide:

1) A task for which recall is more important than precision.

2) A task for which precision is more important than recall.

In both cases, provide a short (few sentence) explanation.

Selected Answer: 1) Analysing patients' blood for positive cancer markers
2) Predicting weather

Correct Answer: We'll return to this in the live session.

Response Feedback: [None Given]

Question 9

Needs Grading

As conversational agents are getting better and better, it may sometimes not always be obvious that you're communicating with a conversational agent instead of a real person. An example could be when you're communicating through an online interface to receive help about a product you bought.

Do you think people should always be made aware that they're communicating with a conversational agent rather than a human?

Provide: Yes/no and a short explanation (few sentences)

Selected Answer: No, as I believe the research in the field is already inhibited by separating humans from intelligence. I believe we humans want to be the ones to tear down these apocalyptic barriers separating humans from machines and not the other way around. This will leave us some room for deciding how this will happen.

Correct Answer: We'll return to this in the live session.

Response Feedback: [None Given]

Question 10

Needs Grading

Are any aspects of the lecture material unclear, or do you have follow-up questions about this?
If I have your feedback in time AND if there is sufficient time to do so, I will try to address this during the live lecture that is associated with this question.

Leave this blank if you do not have any questions.

Selected Answer: Thank you!

Correct Answer: [None]

Response Feedback: [None Given]

Wednesday, November 4, 2020 10:31:42 PM CET

← OK