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**Question 1: Final project topic posting on message board**

For full participation credit, please reply to my post on the course message board with at least three project topic ideas. Once you’ve done so, copy and paste your post below:

-Logit models (discrete choice analysis)

-Propensity scores

-Time series

**Question 2: Confusion matrix exercise**

Use the confusion matrix to answer the questions below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Predicted | | |
| Actual |  | 0 | 1 |
| 0 | 55  TRUE NEGATIVE | 5  FALSE POSITIVE |
| 1 | 10  FALSE NEGATIVE | 30  TRUE POSITIVE |

What is the accuracy of this model?

Accuracy (all correct/ all) = TP + TN / TP + TN + FP + FN

= (30 + 55)/(30 +55 + 5 + 10)

= 85/100

=0.85

What is the precision of this model? (true positives/ predicted positives) = TP/TP+FP

=30/(30+5)

=30/35

= 0.857

What is the recall of this model? (true positives/all actual positives) = TP/TP+FN

=30/(30+10)

=30/40

=0.75

What is the F1 score of this model? F1= TP/(TP + ½(FP + FN))

= 30/(30 + ½(5 + 10)

=30/37.5

= 0.8