Remote calibration of class content and delivery, implementing rapid feedback loops with after-action assessments (AAA)

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The problem: To properly calibrate a class, it is important to get feedback from all students.
Before we went remote, this was straightforward: Clickers can be used to get this feedback at scale.
The after-action assessment (AAA)

Assignment Instructions

Please type the following in the box below:

1) State the main takeaway from this lecture in your own words. 1 paragraph. Keep it brief.

2) What would you like to know more about? (If nothing: What surprised you?) 1 paragraph. Keep it brief.

That's it.
How to get the students to do this, per lecture?

Killing two birds with one stone – making it count for participation (giving them the flexibility to watch lecture recordings asynchronously, etc.)

§2.0 Course grading: The total grade is calculated as follows:

A) After action assessments (participation) 0.5% / lecture  10% total
B) 1 Big data analysis project  16%  16% total
C) 1 Course logistics quiz  1%  01% total
D) 7 Data analysis reports  2% / report  14% total
E) 1 Exam (cumulative)  15%  15% total
F) 7 Functions (Python)  2% / function  14% total
How closely are students following the course material?

Lecture by lecture feedback from a Fall 2020 Introduction to Data Science class...
The central limit theorem (CLT) is a fundamental concept in statistics. It states that as the sample size increases, the distribution of sample means approaches a normal distribution, regardless of the population distribution. This theorem is particularly important in inferential statistics, where it allows researchers to make inferences about population parameters based on sample data.

The CLT is particularly useful in large companies when analyzing data, as it helps in understanding the mean and standard deviation of a population. For example, when Uber is trying to understand user behavior, the CLT can be used to infer the population mean and standard deviation from a sample of user data.

In the context of hypothesis testing, the CLT helps in determining the significance of results. It allows researchers to calculate the probability of observing a sample mean under the null hypothesis. This is particularly useful in fields such as psychology, economics, and engineering, where hypotheses are often tested using sample data.

The CLT is a powerful tool that helps researchers and practitioners make informed decisions based on data. It is a cornerstone of statistical inference and is widely used in various fields to analyze and interpret data.
Clustering learning method classification data machine K-means algorithm. K-number random silhouette trees decision lecture optimal centers forests points neighbor SVM. ROC different distance nearest line curve area. Finally, AUC classify. Supervised learning compared with unsupervised learning. Takeaway. AUC still AUC structure matrix main idea works. ROC K-nearest points calculate vector neighbor predict. KNN works well and still can be improved. Randomly following start ML. Still, it is necessary to understand the difference between prediction and classification. ROC curve maximizes the area under the curve (AUC). ROC curve is used to evaluate the performance of binary classification models. The ROC curve is a plot of the true positive rate (TPR) against the false positive rate (FPR) at various threshold settings.
Insight: Confusion blocks interest

$r = -0.62$

Proportion of students mentioning the word

Lecture
At least 4 birds!

- Participation
- Immediate and specific feedback
- Aggregated insights
- Retention of material (some digestion)
- …?
Downsides?
Thank you