

WEEK 5: HYPOTHESIS TESTING

Student Name - MATH533

THE HYPOTHESIS



A poll conducted by Grammy.com asked 33,967 voters who their favorite is to win Album of the Year at the 63rd Grammy Awards next month. 55% predict that 'Folklore' from Taylor Swift will win the award with 16% predicting 'Everyday Life' from Coldplay and 15% predicting the winner to be 'Future Nostalgia' from Dua Lipa. Could we conclude from this that more than half of all voters think that 'Folklore' will win the Grammy for Album of the Year?

CREATE THE NULL AND ALTERNATIVE HYPOTHESES

- NULL HYPOTHESIS:
HYPOTHESIS:

Proportions answering either yes or no are both 0.50 or 50%

- ALTERNATIVE

Less than 0.50 or 50%. The majority would not predict 'Folklore' to win Album of the Year

CALCULATE TEST STATISTIC AND P-VALUE

- 55% of 33,967 is 18,682
- $z = (0.55 - 0.50) / 0.002$ (Standard deviation becomes 0.002)
- $z = 25$
- P-Value is $< .00001$; $p < .05$

SUMMARY



We can conclude that more than half of voters polled by Grammy.com predict that 'Folklore' by Taylor Swift will win Album of the Year at the 63rd Grammy Awards.