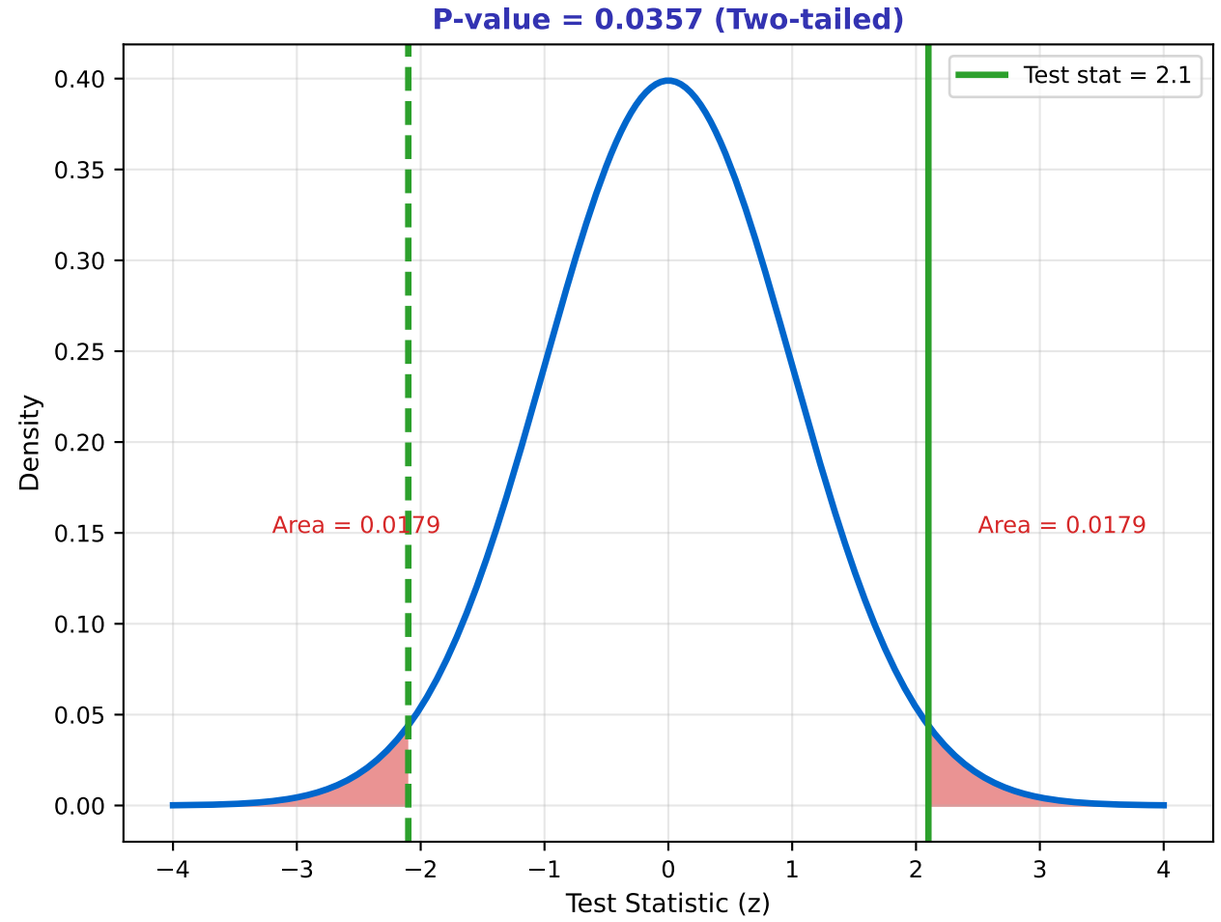
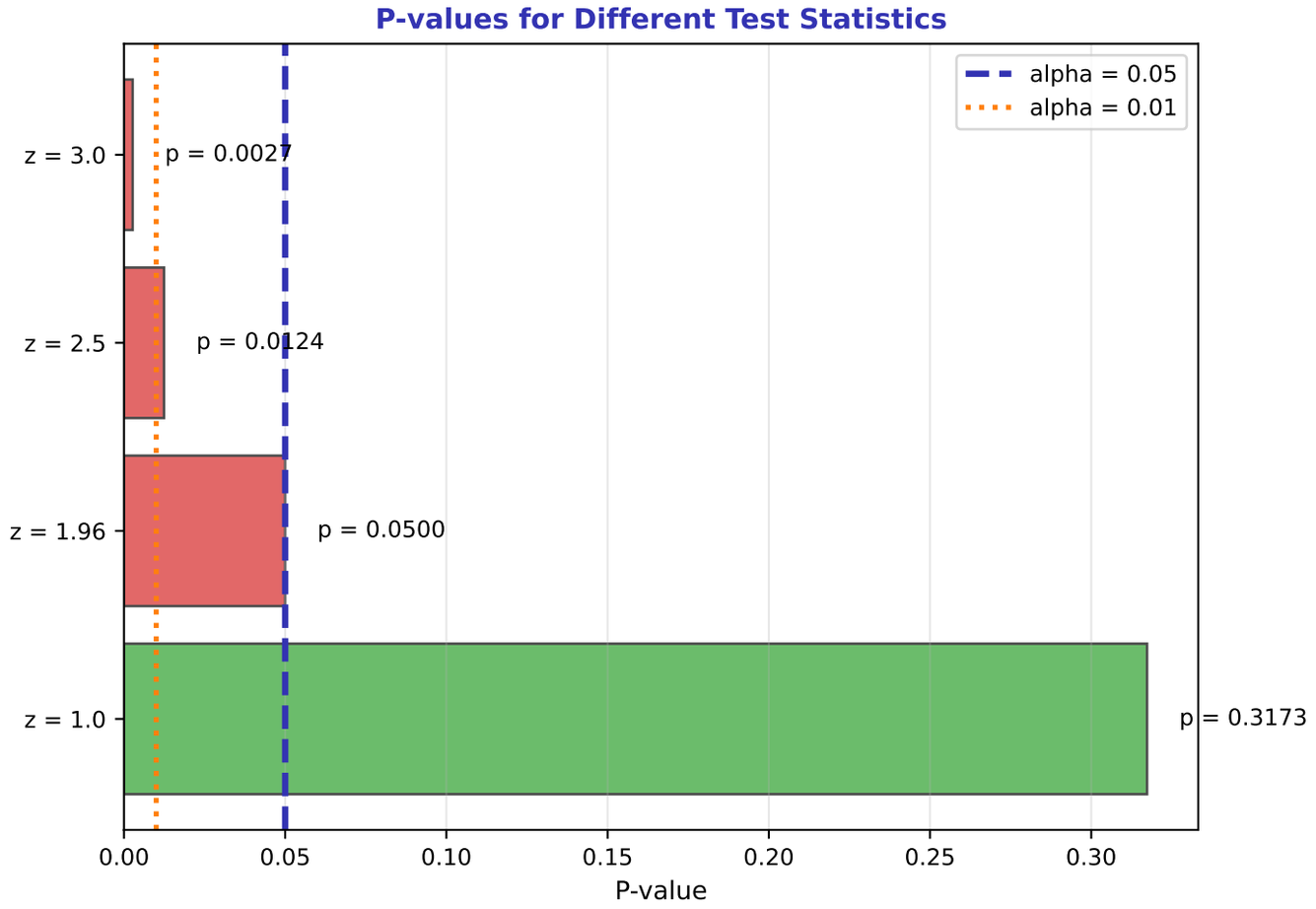
Understanding P-Values





P-Value Interpretation

p > 0.10	No evidence against H0
0.05 < p < 0.10	Weak evidence against H0
0.01 < p < 0.05	Moderate evidence against H0
0.001 < p < 0.01	Strong evidence against H0
p < 0.001	Very strong evidence against H0

P-value = probability of seeing this result (or more extreme) if H0 is true

P-Value: What It Is NOT

- **X** Probability that H0 is true
- **X** Probability that H1 is true
- **X** Probability of making an error
- **X** Size of the effect
- **X** Importance of the finding

P-value IS: Probability of data (or more extreme) given H0 is true: P(Data | H0)

Statistical significance != Practical significance