Inference Glossary

Term	Definition
Statistical inference	The process of using data analysis to infer properties about a population
Multivariate data	Data with multiple variables or characteristics measured on each observation
Sample distribution	The distribution of a statistic calculated from a random sample of a population
Sampling variability	The variation in a statistic that occurs due to taking different random samples from the same population
Statistical estimate	A value calculated from sample data that is used to approximate an unknown population parameter
Summary statistic	A numerical value calculated from the sample data to describe a population characteristic
Exploratory data analysis	Initial examination of data to understand its structure and identify patterns
Confidence interval	A range of plausible values for a population parameter based on sample data
Hypothesis test	A formal statistical procedure for evaluating whether sample evidence supports a claim about a population