



STATISTICS IN EXCEL: HALF-DAY WORKSHOP

Lesson 1: Descriptive statistics

Lesson 2: Inferential statistics
and experimental design

Lesson 3: Statistical hypothesis
testing

Lesson 4: Capstone: A/B testing

Learning Objectives

- Student can classify, visualize and explore variables in a dataset using descriptive statistics
- Student can convert business questions into testable hypotheses
- Student can conduct statistical research for meaningful business outcomes
- Student acquires framework for designing, implementing, and analyzing A/B tests

Lesson plan developed by George Mount. For more resources like this, visit stringfestanalytics.com

Lesson 1: Descriptive statistics

Objective: Student can classify, visualize and explore variables in a dataset using descriptive statistics

Description:

- What is a variable and how do you measure it?
- Visualizing a variable's distribution
- Describing a variable's central tendency

Exercises: Summarizing a dataset with descriptive statistics

Assets needed: Home prices dataset

Time: 50 minutes

Lesson 2: Inferential statistics

Objective: Student can convert business questions into testable hypotheses

Description:

- Central limit theorem
- Law of large numbers
- Hypothesis testing
- Framing an independent samples t-test

Exercises: Crafting hypotheses from data and checking assumptions

Assets needed: Home prices dataset

Time: 50 minutes

Lesson 3: Hypothesis testing and Experimental design

Objective: Student can conduct statistical research for meaningful business outcomes

Description:

- Conducting an independent samples t-test
- Evaluating for substantive and statistical significance
- Analyzing results for informed business decisions
- Presenting results for business impact

Exercises: Evaluating a business experiment

Assets needed: Home prices dataset

Time: 50 minutes

Lesson 4: Capstone: A/B testing

Objective: Student acquires framework for designing, implementing and analyzing A/B tests

Description:

- A/B testing and lean business methods
- Designing an A/B test
- Evaluating an A/B test
- Rolling out A/B test results

Exercises: End-to-end A/B test case study

Assets needed: E-commerce dataset

Time: 50 minutes



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