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Like this course? Become an expert by joining the Data Analysis and Interpretation Specialization (/specializations/data-analysis).

Upgrade

ℹ Congratulations! You have completed Week 1.

Start Week 2

(/learn/data-analysis-tools/home/week/2)

Hypothesis Testing and ANOVA

This session starts where the Data Management and Visualization course left off. Now that you have
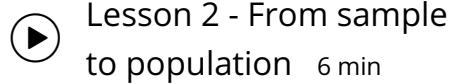
∨ More

The role of probability in inference

▶ Lesson 1 - The role of probability in inference   10 min

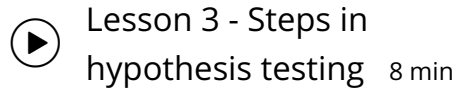(/learn/data-analysis-tools/lecture/0bAyf/lesson-1-the-role-of-probability-in-inference)
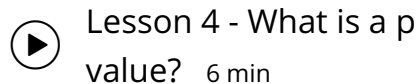
Help Center

From sample to population?

▶ Lesson 2 - From sample
    to population   6 min

(/learn/data-analysis-
tools/lecture/GBSLZ/lesson-2-from-sample-
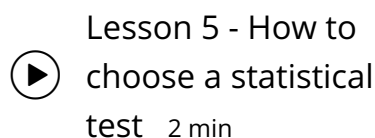to-population)

Steps in hypothesis testing

▶ Lesson 3 - Steps in
    hypothesis testing   8 min

(/learn/data-analysis-
tools/lecture/KhuKo/lesson-3-steps-in-
hypothesis-testing)

What is a p value?

▶ Lesson 4 - What is a p
    value?   6 min

(/learn/data-analysis-
tools/lecture/AgKWT/lesson-4-what-is-a-p-
value)

How to choose a statistical test

▶ Lesson 5 - How to
    choose a statistical
    test   2 min

(/learn/data-analysis-
tools/lecture/hHz26/lesson-5-how-to-choose-
a-statistical-test)

Ideas behind ANOVA

▶ Lesson 6 - Ideas behind
ANOVA   10 min

(/learn/data-analysis-
tools/lecture/YyCRP/lesson-6-ideas-behind-
anova)

Software Setup and Course Supporting Materials

📖 Choosing SAS or
Python

(/learn/data-analysis-
tools/supplement/6nHBL/choosing-sas-or-
python)

● Getting Started with
SAS

(/learn/data-analysis-
tools/supplement/wyORN/getting-started-
with-sas)

● Getting Started with
Python

(/learn/data-analysis-
tools/supplement/WZt9l/getting-started-with-
python)

● Course Codebooks and
Data

(/learn/data-analysis-
tools/supplement/Qc7C3/course-codebooks-
and-data)

● Uploading Your Own
Data to SAS

(/learn/data-analysis-
tools/supplement/5CeHm/uploading-your-
own-data-to-sas)

SAS Lessons

● SAS Program Code for Video Examples

(/learn/data-analysis-tools/supplement/51L9n/sas-program-code-for-video-examples)

(▶) SAS Lesson 7 - ANOVA: Explanatory variable with 2 levels   7 min

(/learn/data-analysis-tools/lecture/jzZaF/sas-lesson-7-anova-explanatory-variable-with-2-levels)

(▶) SAS Lesson 8 - ANOVA: Explanatory variables with more than 2 levels   3 min

(/learn/data-analysis-tools/lecture/LjRrV/sas-lesson-8-anova-explanatory-variables-with-more-than-2-levels)

(▶) SAS Lesson 9 - Post hoc tests for ANOVA   5 min

(/learn/data-analysis-tools/lecture/dzTFB/sas-lesson-9-post-hoc-tests-for-anova)

(▶) SAS Lesson 10 - ANOVA summary   3 min

(/learn/data-analysis-tools/lecture/b5x5j/sas-lesson-10-anova-summary)

Python Lessons

● Python Program Code for Video Examples

(/learn/data-analysis-tools/supplement/7rf6V/python-program-code-for-video-examples)

Python Lesson 7 -

(▶) ANOVA: Explanatory
variables with two
levels   8 min

(/learn/data-analysis-
tools/lecture/ElVbC/python-lesson-7-anova-
explanatory-variables-with-two-levels)

(▶) Python Lesson 8 -
ANOVA: Explanatory
variables with more than
2 levels   3 min

(/learn/data-analysis-
tools/lecture/GCox2/python-lesson-8-anova-
explanatory-variables-with-more-than-2-
levels)

(▶) Python Lesson 9 - Post
hoc tests for
ANOVA   6 min

(/learn/data-analysis-
tools/lecture/uMNjz/python-lesson-9-post-
hoc-tests-for-anova)

(▶) Python Lesson 10 -
ANOVA Summary   3 min

(/learn/data-analysis-
tools/lecture/gasIg/python-lesson-10-anova-
summary)

Assignment

● Getting set up for the
assignments

(/learn/data-analysis-
tools/supplement/3mMvg/getting-set-up-for-
the-assignments)

● Tumblr Instructions

(/learn/data-analysis-
tools/supplement/0YlIG/tumblr-instructions)

Example: Running an

● analysis of variance

(/learn/data-analysis-
tools/supplement/wizuP/example-running-
an-analysis-of-variance)

✓ **Assignment:** Running an
analysis of
variance   30 min

(/learn/data-analysis-
tools/peer/nhp1Q/running-an-analysis-of-
variance)

✓ **Review Classmates:**
Running an analysis of
variance   30 min

(/learn/data-analysis-
tools/peer/nhp1Q/running-an-analysis-of-
variance/give-feedback)