StatQuest Workshop Overview

Course description

Welcome to StatQuest! This course will cover the fundamental descriptive statistics (frequencies, central tendencies, and variability of data) and inferential statistics (t-test and ANOVA*) students will encounter in different fields of research. Students of this course will be introduced to an open-source statistical program to analyze and interpret quantitative data (R).

Workshop Format

Hybrid, 6/09 to 6/12 10 am, to 12 pm, Data Catalyst Studio. Zoom Link: https://arizona.zoom.us/j/7861686314

Learning Outcomes

By the end of this course, students will:

- Understand a large set of concepts of data mining and knowledge discovery.
- Evaluate and use algorithms and software packages to perform data mining analyses.
- Explain and interpret results from data mining analyses.

Textbooks:

- `[Data mining conceptual]` Jiawei Han, Jian Pei, Hanghang Tong. Data Mining Concepts and Techniques. 4th edition. Morgan Kaufmann, 2023.
- `[Data mining algorithms]` Pawel Cichosz. Data Mining Algorithms: Explained Using R. Wiley, 2015.
- `[Data mining case studies]` Luis Torgo. Data Mining with R: Learning with Case Studies. Chapman and Hall/CRC, 2016.
- `[ISRL]` James Garth, Witten Daniela, Hastie Trevor, Tibshirani Robert. An Introduction to Statistical Learning. Springer, 2021/2023.
- `[Pract Time Series]` Nielsen Aileen. Practical Time Series Analysis. O'Rielly, 2020.

Recommended textbooks:

- `[Intro to Data Mining in R]` Michael Hahsler. Introduction to Data Mining R Examples. Online Book, 2021.
- `[ggplot2-book]` Hadley Wickham, Danielle Navarro, and Thomas Lin Pedersen. ggplot2: Elegant Graphics for Data Analysis. (in progress) 3rd edition. Springer, 2022.
- `[r4ds]` Hadley Wickham, Mine Çetinkaya-Rundel, and Garrett Grolemund. R for Data Science. 2nd edition. O'Reilly, 2022.

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