

BIOF 097: Practical Scientific Statistics

As big data becomes the norm and experiments continue to increase in scale, proper understanding and use of statistics is becoming increasingly important for scientists in every field. While experimental researchers are expert in concepts related to their respective fields and receive extensive scientific education, statistical training is relatively lacking. As a result, experimental researchers may feel overwhelmed or uncertain about how to correctly use statistics to quantify their experimental results and how to properly interpret the results of those statistical tests. Unfortunately, this knowledge gap can result in both reduced understanding of reported results in scientific publications as well as superficial or potentially inaccurate reported statistics. This workshop serves as a practical, hands-on workshop to close the knowledge gap and help experimental researchers learn how to choose a statistical test for their data, how to perform those tests, and how to interpret the results. The workshop starts by establishing a solid foundation in basic statistical theory before advancing to practical applications of statistical tests on real data.

Learning Objectives

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Class Type: Workshop

Prerequisites:

Attendees should have access to and basic knowledge of Excel. Analyses will also be demonstrated in SPSS and R, but no formal programming skills are required.

Program: Bioinformatics and Data Science

Availability Summer 2021