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# Using SPSS

SPSS can be access using Imperial Software Hub, we will be using **SPSS 28**. After logging-in to Imperial software hub, search for SPSS, and click to install or launch (if already installed).

SPSS 28
IBM

SPSS comes with massive range of options and analysis techniques; however, we will only focus on a very few useful features. For exploring more detail on tutorials, please refer to https://www.spss-tutorials.com/basics/

# Data

For this work session, we will be using PhyAAt (Physiology of Auditory Attention) dataset, which is a dataset during an auditory experiment, from 25 subjects. Dataset includes physiological measurements, however, for this session, we will use part of data – attention level under different auditory conditions. Full detail of experiment and dataset is available here https://phyaat.github.io/.
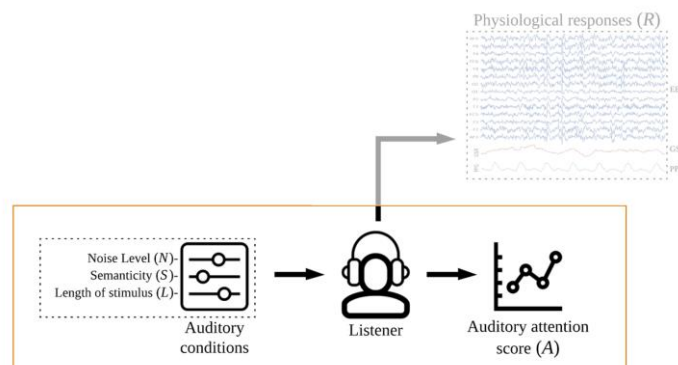


Please download following two datasets (csv files)

1. Dataset-1: Auditory attention level with different conditions - https://nikeshbajaj.github.io/PhyaatDataset/PhyAAt_AttentionScoreData_v1.csv
2. Dataset-2: Demographics and self-ratings of subjects for their language skills - https://nikeshbajaj.github.io/PhyaatDataset/PhyAAt_Demographic_Rating_v1.csv

One of the articles including statistical analysis using same dataset is published and can be found here - https://academic-publishing.org/index.php/ejel/article/view/2296. Though, this article goes in little more details, however some ideas of describing the datasets can be found useful.

# Descriptive Statistics

First, we will use SPSS to describe the datasets with figures and tables.

- Descriptive statists
- Box plot
- Bar plot

# Comparing Groups

- Independent tests (parametric, non-parametric)
- Dependent tests (parametric, non-parametric)
- Normality test, Equal variance test

# Correlation

- Pearson Correlation, Spearman Rank Correlation
- Scatter plot