

# logDataLimeSurvey

# Our goal

- To bring the possibility of gathering log-data into *ordinary* web-surveys
  - Getting out of the controlled environment (every respondent having the same hardware & software configuration) comes with severe analytical problems on its own (at least applying methodological standards of experimental, cognitive psychology)

# The general idea

- Collecting data regarding user interaction with website using Java Script is quite easy in general
  - Typical website technology
- Solution should be implemented within one of the established web-survey platform:
  - To make it be only about log-data collection, with all the other web-surveying features being already available on the platform
  - To enable application to be simple and easy to develop and maintain
  - To make it relatively easy accessible for many users

# The structure of our solution

- Develop a Java Script applet that will be responsible for collecting log-data stream and writing it down as an *answer to an **ordinary text-format survey question***
- Enable to hide such questions from the respondent
- **Rely on web-survey platform capabilities to save question answers to record log-data streams**
- Complement the solution by developing R package that will process such *raw* log-data streams into analytically useful form

# Pros

- Implementation within a web-survey platform is quite easy, if only the platform enables to use user-written Java Script applets
  - Our Java Script applet is really simple
  - And still it enables to collect a very wide set of data about respondent's actions
  - At the level of log-data stream collection it is (mostly) question-format independent
- The same approach may be feasible also with other web-survey platforms that the Lime Survey

# Cons

- Relying on web-survey platform capabilities to save question answers to record log-data streams showed to be a bottle-neck
  - With the growing size of log-data stream there is a growing probability of either causing lags or dropping out some log-data while saving it (or both)
    - Lime Survey's asynchronous saving of survey responses doesn't work well with really big data
  - Our solution turned out to be feasible only for surveys where respondents are supposed not to spent to much time on a single screen

# Cons

- Collected log-data is very *low-level* and needs to be thoroughly processed to be analytical useful
  - This problem is addressed by our *logLime* R package

# Resources

- *logDataLimeSurvey* Java Script applet GitHub page:
  - <https://github.com/tzoltak/logdataLimeSurvey>
- *logLime* GitHub page:
  - <https://github.com/tzoltak/logLime>
- Materials from the workshop:
  - <https://github.com/tzoltak/workshopsIFiS/tree/main/2-logLime>