

## **FROM TEXT TO ACTION: AN R WORKSHOP ON LARGE LANGUAGE MODELS FOR EXPERIENCE SAMPLING DATA**

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**Level:** Beginner, **Format:** Half-day

### **Background**

Experience Sampling Methods (ESM) routinely collect open-ended responses alongside numerical ratings, yet these textual responses remain systematically underused in ESM, partly due to a lack of accessible tools and training (Bringmann et al., 2026). Large language models (LLMs) offer a promising solution for performing these tasks, as, unlike other natural language processing (NLP) tools, they can handle the idiosyncratic language of ESM responses. LLMs can also be used without task-specific training data to support tasks such as text extraction and codebook applications. Using locally hosted LLMs increases the security of processing sensitive participant data. Despite these promises, practical R-native workflows tailored to ESM researchers are lacking.

### **Aims**

This workshop introduces LLMs as practical tools for extracting information from open-ended ESM responses and applying codebooks. By the end of the workshop, participants will be able to: (1) distinguish between NLP and LLM tools and select the most suitable tool for each task; (2) deploy and access an open-source LLM in R; (3) write and refine prompts to extract structured information from ESM free text; (4) evaluate the accuracy of the extracted information against human-annotated references (5) generate adaptive follow-up questions during ESM data collection

### **Target Audience/Format**

The workshop is open to a maximum of 20 ESM researchers, students and clinicians from the fields of psychology and the social sciences. No prior LLMs/ NLP experience is required; basic familiarity with R is helpful. To host LLMs locally, participants need a modern MacBook (M1+) or a dedicated GPU; however, cloud alternatives will be introduced. The session consists of four phases: (1) a brief conceptual introduction to the use of LLMs and other NLP tools, including a small-group discussion; (2) participants work through a structured R Markdown script to extract contextual information from provided event descriptions, or optionally from their own data and task; (3) participants evaluate their outputs against a gold standard; and (4) test LLM generated follow-up question based on their prompts in m-path.

### **Expected Outcomes**

Participants will learn how to apply these tools in their own ESM studies, and an annotated R script that they can adapt to their own tasks. The key messages are that open-source LLMs can be used locally in R, person-specific information can be extracted and coded from ESM free text, and the approach generalises to a range of text-analysis tasks.

**Conflict of Interest:** The authors declare no conflict of interest.