

Large-Scale Analysis of Stimulus/Response Matrices (LASM)

Team Project

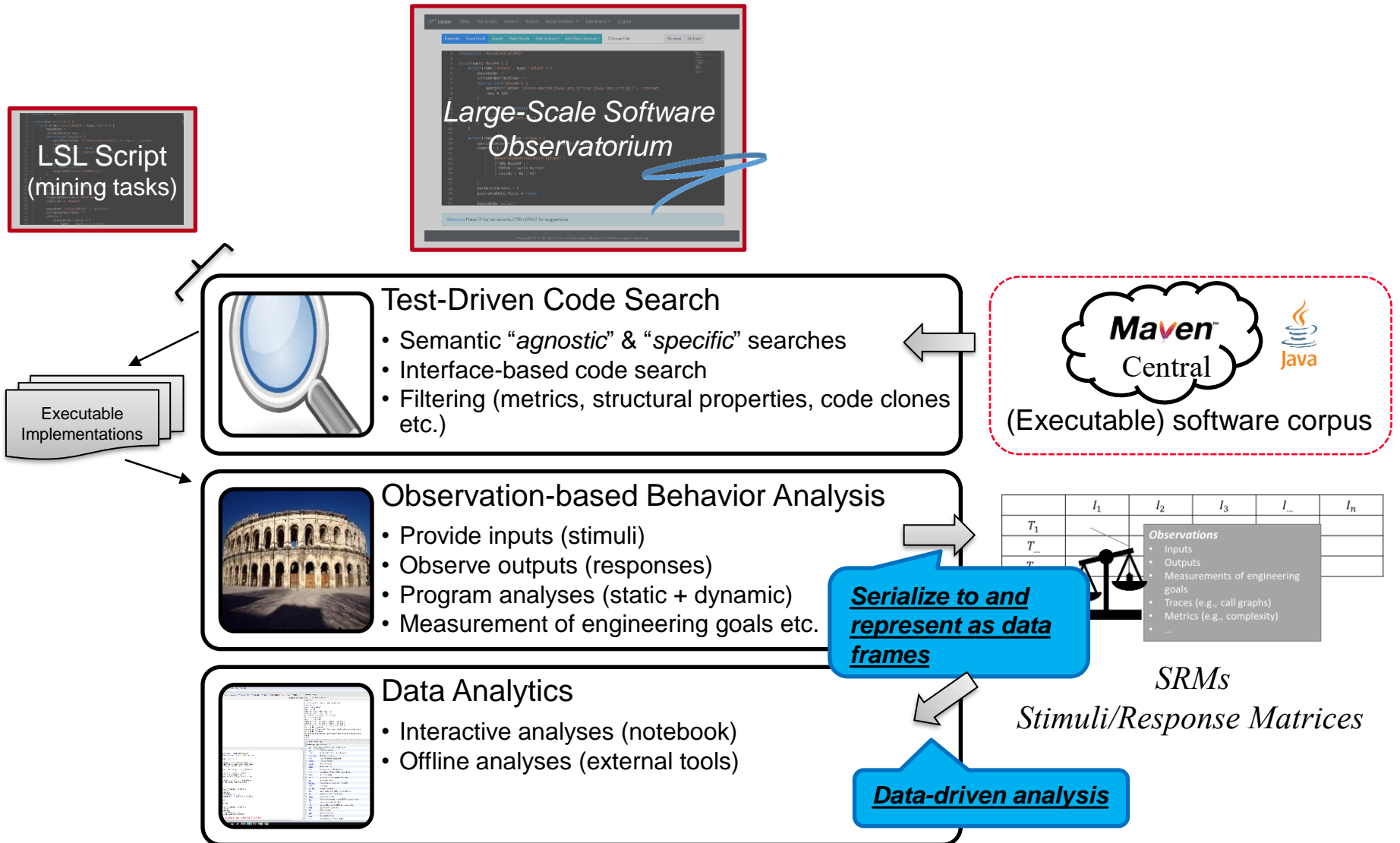
HWS 2022



**UNIVERSITY
OF MANNHEIM**

School of Business Informatics
and Mathematics

LASSO Platform: Search and Analyse “Big Code“



Goal

- LASSO is a leading-edge software observatorium that allows advanced search and analysis techniques to be applied to “big code”. Among other things, this simplifies experimentation and the validation of tools and software engineering approaches.
- The goal of this team project is to simplify the *data-driven analysis of (behavioral) observations* captured at software execution time. This includes –
 - a systematic approach to the serialization of stimulus/response pairs (inputs and outputs in terms of Java Object Graphs) into strings or similar types
 - the representation of observations in tabular representations of data (i.e., data frames)
 - a taxonomy of response types (e.g., group responses based on common behavior like failure handling)
 - setting up advanced analysis pipelines for machine learning opportunities (i.e., classification/clustering etc.)



Goal

- Participants
 - 6 students
- Length
 - 6 months
- Required Skills
 - Data Analytics and data frame manipulation (Pandas, R, Spark etc.)
 - Java Programming
- Language
 - English
- Organisation
 - Goals and timetable defined by agreement with the supervisor
- Suitability
 - WiFO
 - MMDS
- Supervisor
 - Marcus Kessel

