

Workshop 5 Guide

WORKSHOP CREATING HYBRID REASONING SYSTEM EEP & MTech Stackable

• KIE Minimum Viable Product (MVP) – Individual Work

- Determine a new business problem suitable for advanced reasoning techniques **OR** significantly enhance a previous workshop project
- Plan, design, develop, integrate, test, and deploy bespoke hybrid reasoning system using components, e.g. KIE tools, OptaPlanner, Genetic algorithms, Orange, Data mining.
- Prepare project report and user guide.
- Submit project deliverables. Refer to [Project Submission Template](#)

☺ Candidate Project: Hybrid Airport Gate Assignment System (HAGAS)

http://ousar.lib.okayama-u.ac.jp/files/public/4/48534/20160528091554614463/K0004584_honbun.pdf

WORKSHOP CREATING HYBRID REASONING SYSTEM MTech Thru-Train

• KIE Minimum Viable Product (MVP) – Group Work

- Form a project team of 4-6 members, choose a team name, appoint a team leader.
- Plan, design, develop, integrate, test, and deploy bespoke hybrid reasoning system using components, e.g. KIE tools, OptaPlanner, Genetic algorithms, Orange, Data mining.
- Prepare project report and user guide.
- Prepare system demo for video presentation.
- Submit project deliverables. Refer to [Project Submission Template](#)

☺ Candidate Project: Hybrid Airport Gate Assignment System (HAGAS)

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Workshop 5.1 [EEP Individual / MTech Group]

Identify a relevant business scenario/problem. Propose and create a hybrid reasoning system.

The proposed group workshop project must develop, integrate, and demonstrate at least **two out of following **three** technique groups:**

1. Business rule **OR** Business process based reasoning techniques
2. Business resource optimization techniques: Heuristic search **OR** Constraint satisfaction **OR** Evolutional computing
3. Knowledge Discovery **OR** Data Mining techniques

The submitted runnable system should have a graphical user interface for end user to input or update data to execute different business scenarios, e.g. to enable initial planning and frequent re-planning/re-optimization. And to display system output results in a user friendly manner. (Input/output using xml file or console log is not considered as user friendly.)

Candidate/Example Project:

ANNEX 1 WORKSHOP PROJECT CANDIDATE

Project Submission Guideline:

ANNEX 2 PROJECT CODE EXPORT & IMPORT USING KIE WORKBENCH

ANNEX 3 WORKSHOP PROJECT SUBMISSION

Domain Modelling Reference

- https://docs.optaplanner.org/latest/optaplanner-docs/html_single/index.html#designPatterns

The End of Workshop Project Guide