

JARDIN Hackathon on Health Data Federated Querying

Agenda (Approx. 4 Hours)

1. Introduction (20 min)

- Overview of the **JARDIN project**
- Importance of **federated querying** for healthcare
- Presentation of **key challenges** in health care data harmonisation
- **Hackathon goal & structure**

2. Team Formation & Challenge Selection (10 min)

- Introduction of the **three challenge groups** and their objectives
- Participants **assignment** to groups

3. Working Session 1 – Breakout Groups (1h 45 min)

- **Challenge #1: Harmonization of HCP Systems Exports**
 - *Goal:* Convert heterogeneous CSV exports from different healthcare provider (HCP) systems into a semantic-web-friendly format
 - *Tasks:*
 - Design a minimal semantic model for the research question
 - Define a target (ontologised) CSV template
 - Write/sketch conversion scripts – focus on adaptability
 - *Suggested expertise:* Developers, ontologists, semantic modellers
- **Challenge #2: Federated Querying Service**
 - *Goal:* Develop a service/API that can receive predefined requests, perform federated queries across multiple datasets (that are aligned to a shared schema), and return non-sensitive results
 - *Tasks:*
 - Define the querying workflow and expected inputs/outputs,
 - Implement a proof-of-concept API or script to demonstrate federated querying
 - Discuss privacy-preserving techniques to ensure sensitive data is protected – *focus on challenges for running this service on the HCPs side*
 - *Suggested expertise:* Semantic web experts, developers, federated querying specialists, HCP systems specialist

- **Challenge #3: Exposing a Data Service on a FAIR Data Point (FDP)**
 - *Goal:* Improve how a data service is described in an FDP.
 - *Tasks:*
 - Review the current metadata model of a reference FDP implementation and identify gaps and potential improvements in how data services are described/exposed
 - Suggest and test enhancements to the FDP metadata model and user interface for better usability
 - *Suggested expertise:* Semantic web experts, metadata specialists, FDP experts

4. Break (20min)

5. Group Discussion (20 min)

- Groups reconvene to share progress, challenges, and insights
- Open discussion for cross-group collaboration and potential adjustments

5. Working Session 2 – Iteration & Refinement (1h 10 min)

- Participants can continue refining their work or switch groups if they want to contribute elsewhere

6. Wrap-up & Closing Discussion (15 min)

- Groups discuss main outcomes
- Closing and next steps
- Exit survey (demonstration of interest in future events)