Semester-Thesis/IDP

Vue.js Frontend Development for the DataHub Website (Dataset Catalog, Versioning & Access Control)

The DataHub shall be a central platform to manage and provide project data (incl. simulation and validation datasets) to different stakeholders. In this project you will develop the **web frontend** for the DataHub in preferably **Vue.js**, integrated with **Keycloak (OIDC)**. The UI should enable an efficient, traceable and GDPR-compliant workflow for browsing, sharing, and preparing data, including **versioning**, **rights/roles**, and **source/provenance references**.

Work Packages

- Onboarding & requirements extraction: understand DataHub concepts (datasets, versions, provenance, permissions) and derive UI screens/flows.
- UI/UX concept & component architecture: navigation, dataset catalog, dataset detail pages, admin/management views; API contract review with backend.
- Implementation: Keycloak login, role-based UI, dataset search/filter, dataset details (versions + provenance), permission management UI, and optional upload/management views (depending on backend endpoints).
- Quality & delivery: basic e2e/manual test plan, error handling, accessibility basics, and container-ready build (e.g., Docker) + concise documentation.

Prerequisites

- Skills in web development and Git
- Practical experience with Vue.js or similar frontend frameworks (React, Angular)
- Independent and structured working style

Variations of the topic and additional research questions proposed on your own initiative are always welcome. If you are interested, please send an email including your CV, transcript, and a short explanation of why you are particularly well-suited for this topic.

The write-up should document the individual work steps in a clear and structured manner. The candidate commits to completing the project independently and to properly citing the scientific resources and tools used.

The submitted work will remain with the department/chair as part of the examination records.

Prof. Dr.-Ing. M. Lienkamp   Supervisor: Till Zacher, M.Sc.

Issued: _____   Due: _____