

The Smart Data Innovation Lab Research Platform

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The Smart Data Innovation Lab (SDIL) is established as a nationwide laboratory for Smart Data research. It facilitates the analysis of complex data by providing state-of-the-art in-memory and big-data technologies. SDIL provides a platform to promote the cooperation between industry and public as well as private research sectors in the field of big data and smart data technologies. Companies and research institutions have organized themselves as partners in the SDIL Communities “Industry 4.0”, “Medicine”, and “Smart Infrastructure” with a focus on Energy and Smart Cities. The aim of each of the SDIL communities is to intensify the cooperation between businesses and science in the area of smart data solutions.

SDIL provides research projects with a top-class infrastructure for in-memory and big-data analytics. The SDIL platform is operated in the server rooms of the Steinbuch Centre for Computing at the Karlsruhe Institute of Technology. It integrates several main components. These are among others the in-memory databases HANA (SAP) and Terracotta (Software AG), the big-data analytics solutions of the IBM Watson Foundation including the SPSS Modeler and BigInsights and FusionInsight (Huawei), a compute-cluster and virtualization environments allowing for a flexible deployment of customized machines for user applications.

Due to the diverse structure of the SDIL platform, both with regard to the existing hardware as well as the available analysis software, special challenges arise in the operation of an efficient and safe environment. This talk highlights various aspects of the developed concepts for this purpose.

Track

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