

Data harmonization

Data harmonization is the improvement of **data quality** and utilization through the use of **machine learning** capabilities. Data harmonization interprets existing characteristics of data and action taken on data and uses that information to transform or suggest subsequent data quality improvements.

A significant portion of **data** in **Electronic Health Records** is only available as unstructured **text**, such as surgical or finding **reports**, clinical notes, and discharge summaries. To use this data for secondary purposes, **natural language processing** (NLP) tools are required to extract structured information. Furthermore, for interoperable use, **data harmonization**. HL7 **Fast Healthcare Interoperability Resources** (FHIR), an emerging **standard** for exchanging healthcare data, defines such a structured format. For German-language medical NLP, the tool **Averbis Health Discovery** (AHD) represents a comprehensive solution. AHD offers a proprietary REST interface for text analysis pipelines. To build a bridge between FHIR and this interface, we created a service that translates the communication around AHD from and to FHIR. The application is available under an open-source license ¹⁾.

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