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Federated Analytics and Agents Architecture

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Federated data analysis is a technology for building distributed data analysis systems where no data is moved from their storage (collection) locations for analysis. This is a data analysis technology that defines a new level of access and transfers analysis and calculations directly to where the data is located. The World Economic Forum notes that, in fact, 97% of collected healthcare data is unused –it cannot be directly downloaded (uploaded to external sites), and there are no tools for federated analysis. The vast amount of data produced by healthcare institutions around the world remains underutilized. The state of affairs with research data is likely even worse. Federated data analysis allows researchers to safely analyze data from different organizations. Restrictions on data access, cybersecurity requirements, and the development of edge device intelligence are all factors that will ensure growing interest in this technology. The paper examines issues of designing the architecture of such systems.

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