enRichMyData

Enabling Data Enrichment Pipelines for AI-driven Business Products and Services

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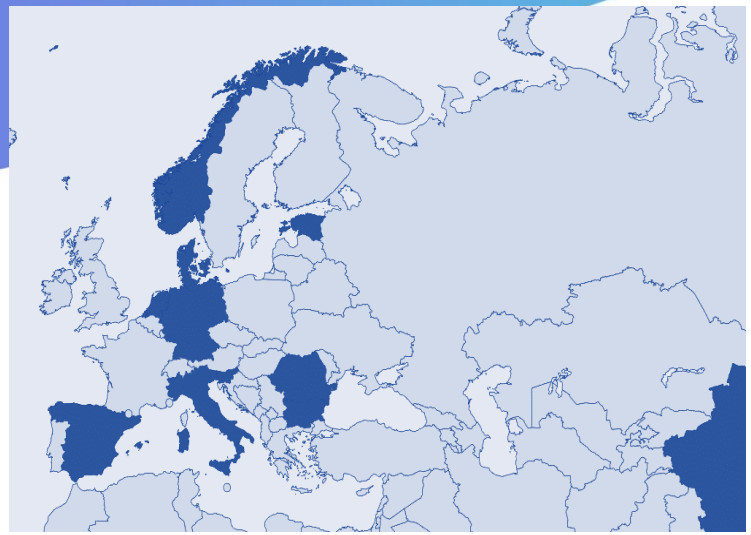
enRichMyData Project



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enRichMyData Vision and Objectives

Vision

Create a novel paradigm for building rich, high-quality, valuable, and FAIR-compliant datasets to feed downstream Big Data and AI applications in the context of **Data-sharing Ecosystems**

Objectives

- Improve data discovery and profiling of potentially valuable data
- Improve wrapping of data sources in different formats
- Simplify cleaning, linking and extension of data
- Simplify annotation and classification of textual data
- Support the management of data enrichment pipelines
- Support data streaming in data enrichment pipelines
- Monitor and reduce energy consumption for executing data enrichment pipelines

Main challenges targeted by enRichMyData

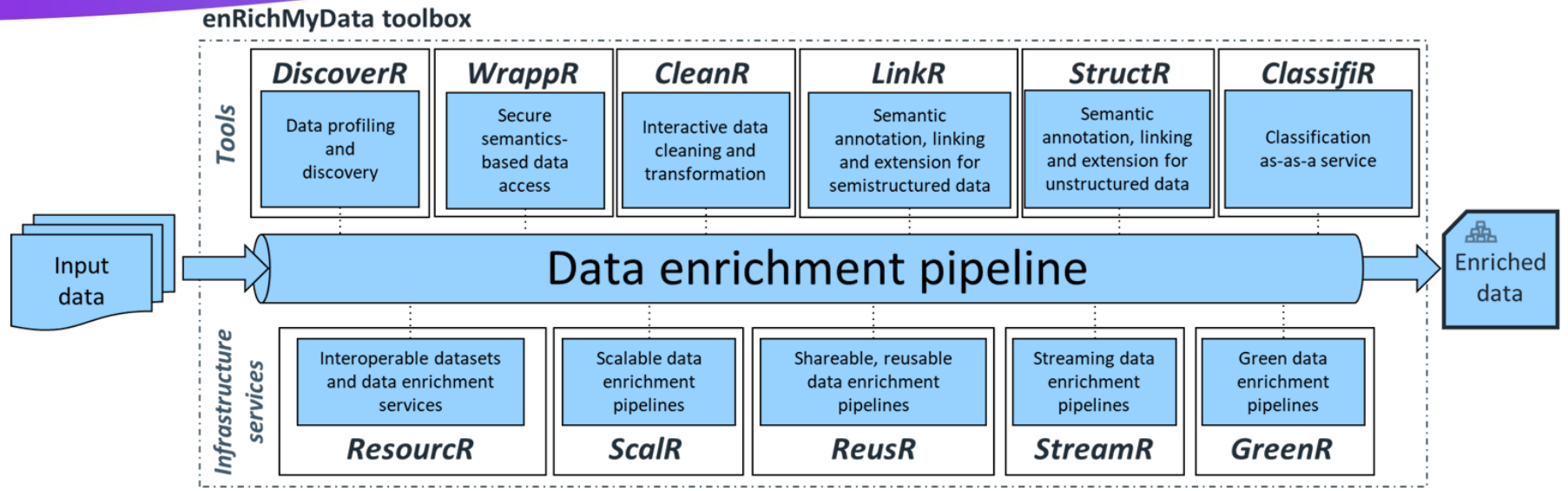
Related to data enrichment

- Lack of holistic end-to-end support for data enrichment lifecycle
- Steep learning curve for performing data enrichment tasks
- Lack of Machine Learning with Humans-In-The-Loop paradigm

Related to infrastructure

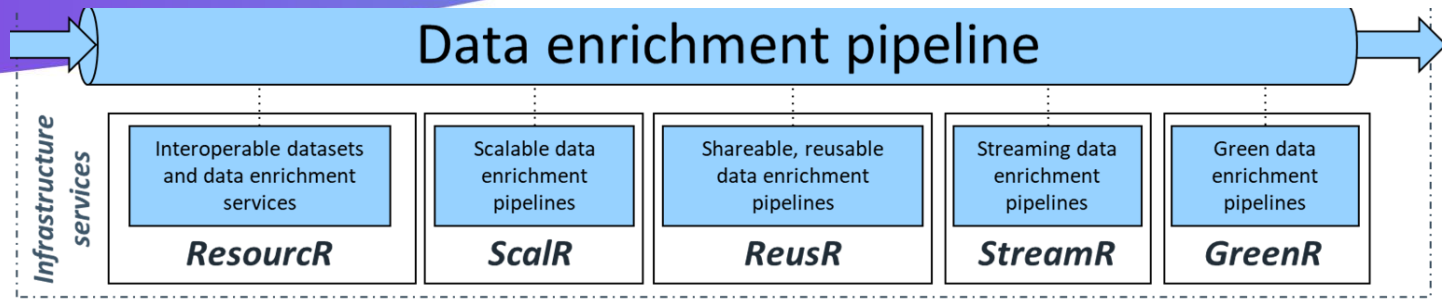
- Limited support for scalable execution of data enrichment pipelines,
- Little repeatability and reusability of data enrichment pipelines,
- Low sustainability due to inefficient use of resources and high CO2 footprint.

enRichMyData Toolbox and Business Cases



(***Digital Marketing***) Marketing data enrichment for smart-bidding optimization
(***Manufacturing***) AI-based Welding Analytics
(***Predictive Maintenance***) Smart Maintenance of Medical Imaging Systems
(***Public Procurement***) European Register of Entities from Known Actions
(***Innovation Ecosystems***) Innovation Knowledge Graph
(***Mineral Processing***) Mineral Processing Optimization

enRichMyData Tools addressing infrastructure challenges



ScalR provides horizontal scalability of data enrichment pipelines and support for management of the different procedures associated with the **execution of data enrichment pipelines flexibly on heterogeneous computing infrastructures**.

StreamR provides for streaming support in data enrichment pipelines. It pipes data streams from/to appropriate endpoints and **ensures high throughput**, providing a configurable set of tools for **setting up custom streams for new applications.**

GreenR supports monitoring of data enrichment pipelines in terms of their environmental impact. It monitors the carbon footprint of the various components in the pipeline and provides the results to a **dashboard to log and modulate the pipelines' heavy computations environmental impact.**

enRichMyData

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