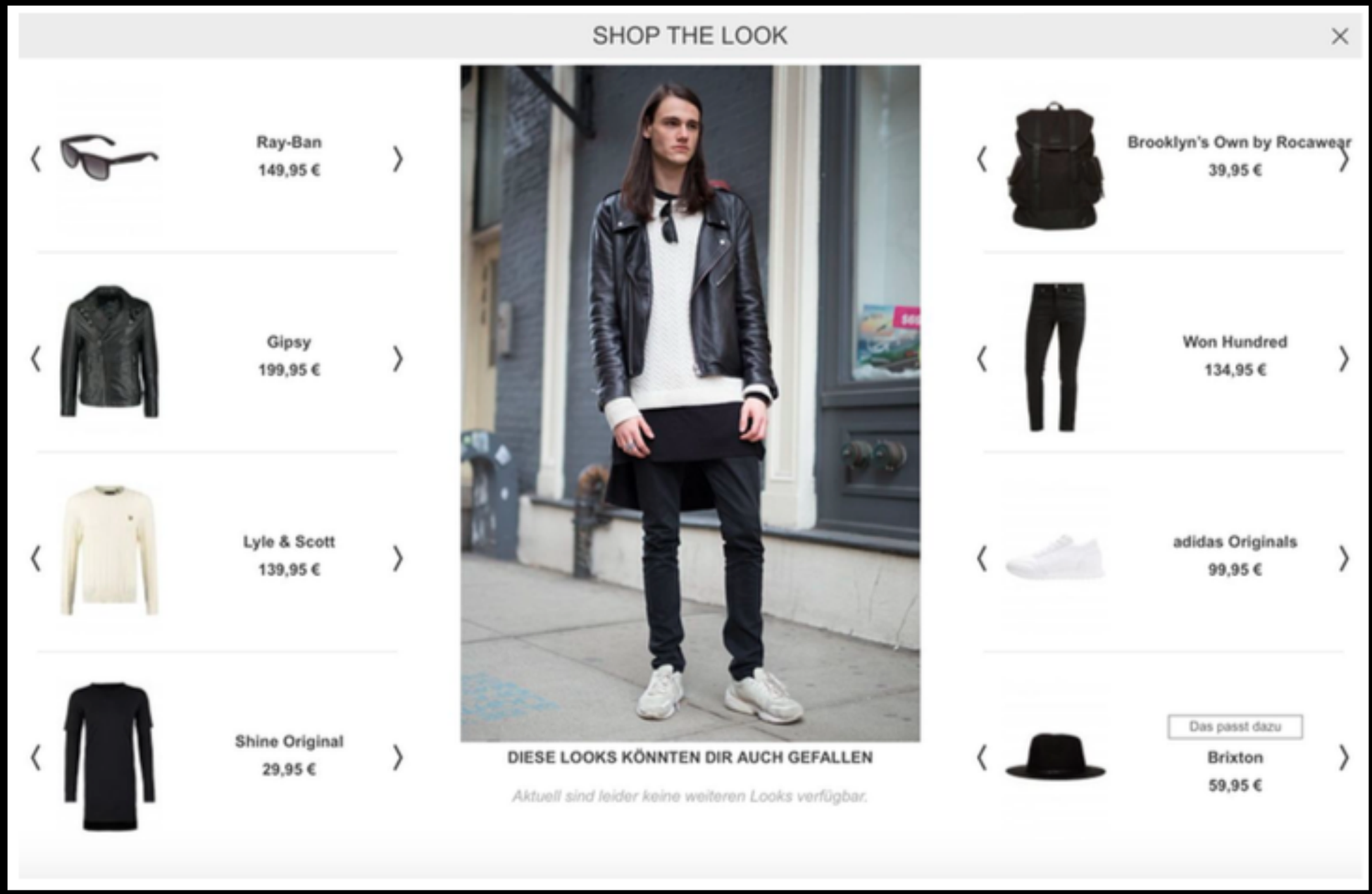
FashionBrain

Understanding Europe's Fashion Data Universe

fashionbrain-project.eu

Photo-based product search and recommendation



FashionBrain Objectives

Novel Shopping Experience: **Make Images Searchable**

- Product search and recommendation
- Moving away from the `real human shop assistants'

Shift Traffic away from Web Search Engines to **Retailer's Mobile Apps**

- By providing custom shopping experiences and advanced search tools

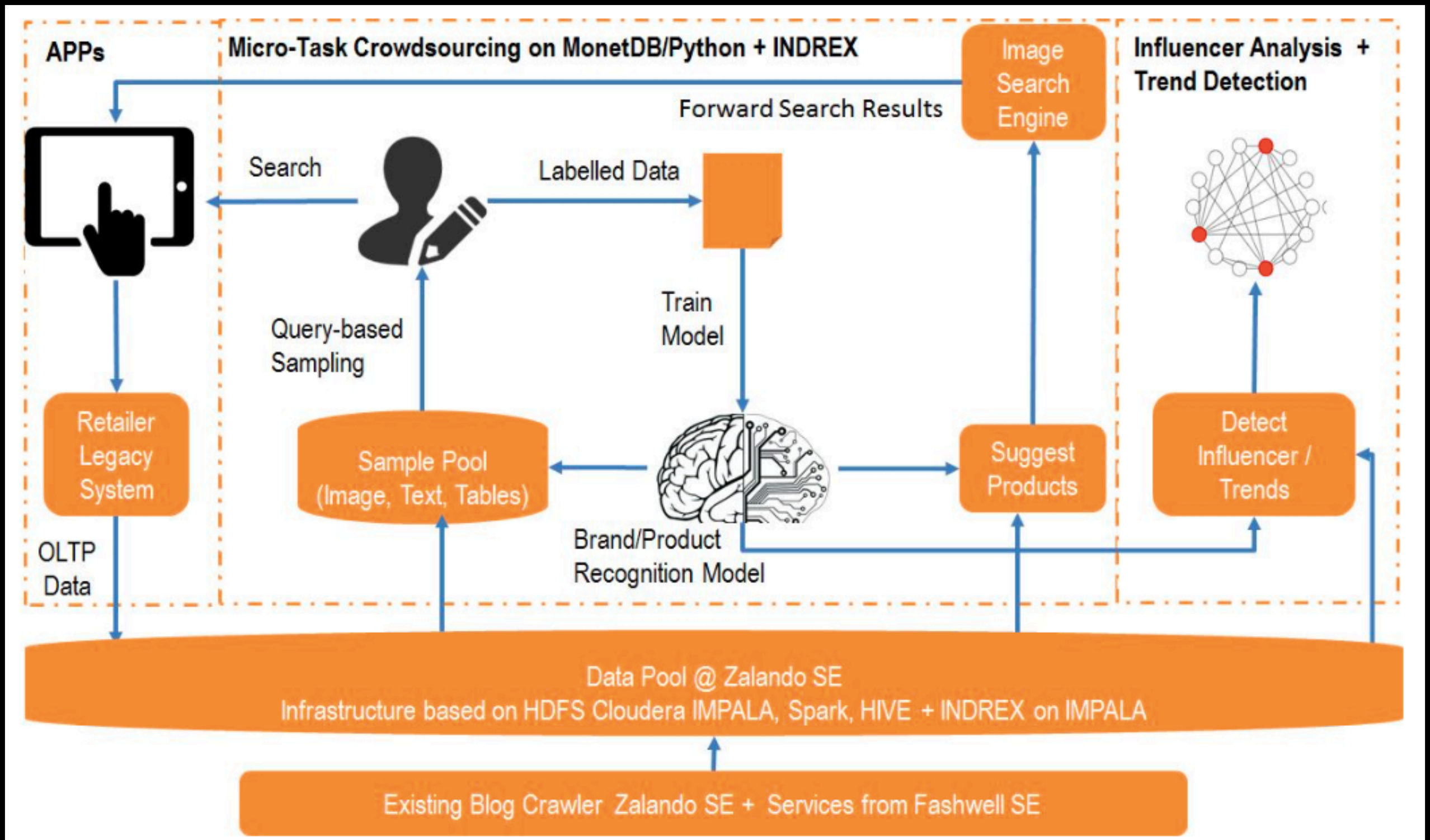
Detect Influencers and **Predict Fashion Trends**

- **Deep Learning** based Text Mining
- Time Series Analysis

Share Insights with Cross Industry Partner Network

- Data Integration infrastructure based on HDFS and column stores (MonetDb)
- New data entity-centric integration methods: named entity recognition and linking across sources

Searching and shopping query workflows



Guiding Standards

Open source column based database system that allows scalability and interoperability

MonetDB Solutions: in database machine learning, advanced text data mining (*early phase)*

Beuth: extend MonetDB for various entity linkage strategies with neural embeddings: nearest neighbour search functions and pairwise loss functions to match representations of textual and relational data; develop a relation extraction tool

Fribourg: integrating time series operations into MonetDB (early phase); develop a universal fashion ontology with visualisation and edit tools.

Data Innovation Recommendations

Publications on Crowdsourcing, Data Mining, IR

[Alessandro Checco et. al., Para Bellum, Breaking Gold Questions Quality Assurance Systems in Paid Micro-task Crowdsourcing, HHMC 2017]

[Alessandro Checco et. al., Let's Agree to Disagree: Fixing Agreement Measures for Crowdsourcing, HCOMP 2017]

[Alessandro Checco et. al., FashionBrain Project: A Vision for Understanding Europe's Fashion Data Universe, Fashion-ML-KDD 2017]

[Ujwal Gadiraju et. al., Modus Operandi of Crowd Workers: The Invisible Role of Microtask Work Environments, UBICOMP 2017]

[Mengdie Zhuang et. al, Understanding Engagement through Searching Behaviour, CIKM'17]

[Eddy Maddalena et. al, Considering Assessor Agreement in IR Evaluation, ICTIR 2017]

[Rudolf Schneider et. al, Analysing Errors of Open Information Extraction Systems, EMNLP 2017]

[Alan Akbik et. al., The Projector: An Interactive Annotation Projection Visualization Tool, EMNLP 2017]

Know-how and Skills

Fashwell: image recognition from multiple datasets with automatic labelling from a fashion ontology (from **Fribourg**). (Coming soon)

Sheffield: development of a crowdsourcing tool suite/plugin set

- Worker behaviour analysis
- Logging library
- ModOp
- Task/job matching