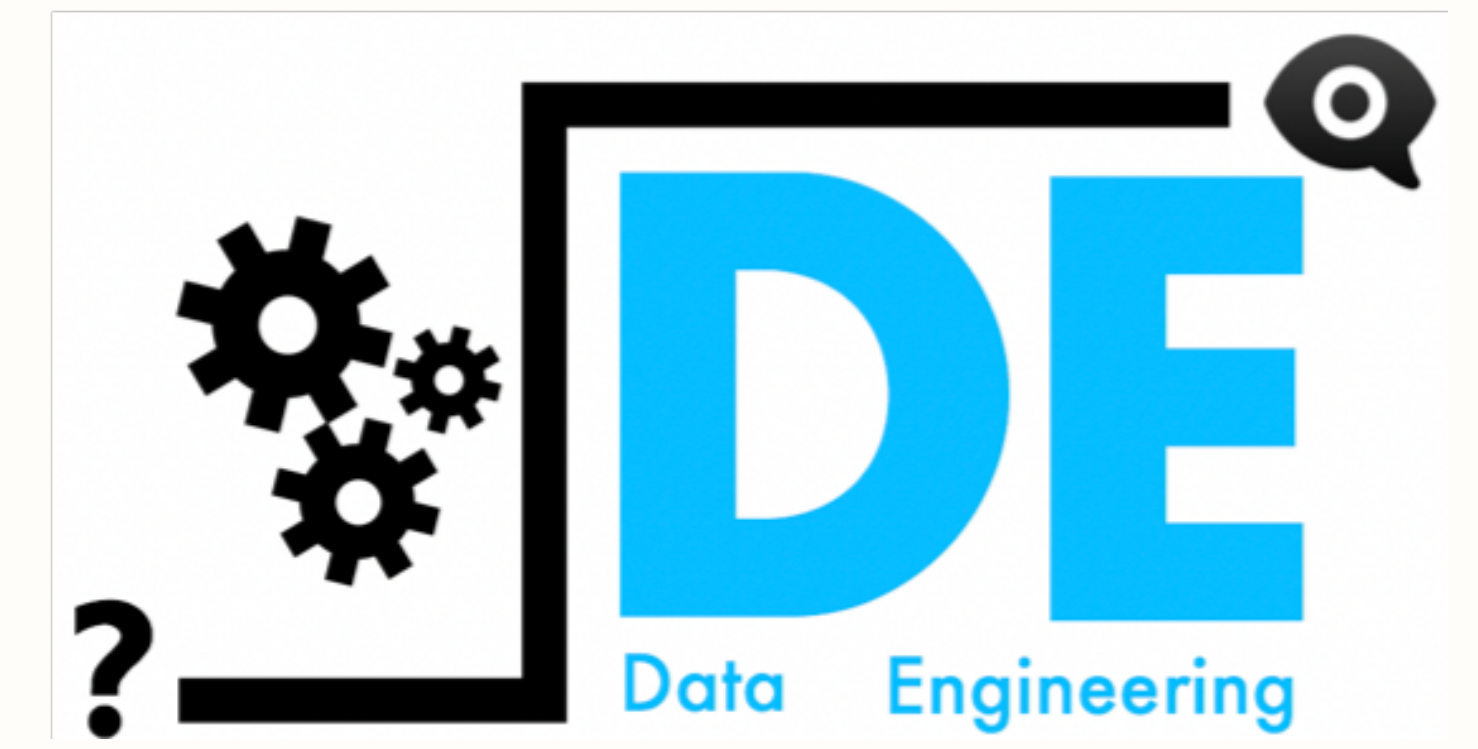




Study of quantification metrics for data recommendation systems



Topic

Data exploration is commonly conducted using visual analytic tools that provide recommended views meant to facilitate user's task. In this context, we have proposed EVLIN[1], a recommendation approach that assists users in exploring data warehouses. This project aims at extending EVLIN by *integrating additional metrics* that are used to score recommendations. Being able to rank recommendations supports users in selecting what to explore next.

The current EVLIN prototype[2] uses the Kullback Leiber divergence score as metric. The goal of this project is to integrate and compare further metrics that quantify the deviation between two datasets. These include Earth Mover's distance, chi squared distance, Euclidian distance and Jensen–Shannon divergence.

Purposes

The goals of this project are:

- ◇ Study of quantification metrics that assess deviation between two datasets.
- ◇ Implementation of quantification metrics in EVLIN prototype.
- ◇ Evaluation of implemented metrics.

References

- 1 Ben Lahmar, H.; Herschel, M.: Provenance-based Recommendations for Visual Data Exploration. In: Workshop on Theory and Practice of Provenance (TaPP). 2017.
- 2 Ben Lahmar, H.; Herschel, M.; Blumenschein, M.; Keim, D. A.: Provenance-Based Visual Data Exploration with EVLIN. In: Conference on Extending Database Technology (EDBT). 2018.

Application

We are looking forward to your application (detailed CV and university transcripts) in PDF format.

- ◇ contact: Housseem Ben Lahmar (housseem.ben-lahmar@ipvs.uni-stuttgart.de, Office 2.463).