Customer Loyalty Improvement Recommender System (CLIRS)

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**INTRODUCTION**

- **Net Promoter Score** – a popular measure for customer loyalty
- Consulting telephone survey data on B2B customer feedback all over US
- Data collected over 6 years from 38 companies in heavy equipment repair industry
- The goal is to:
  - improve NPS and revenue
  - understand customer sentiment
  - identify the most valuable improvements
  - prioritize the highest ROI changes

**METHOD**

- **Action rules**:
  - Are mined from large datasets with data mining algorithms
  - Can be understood as patterns in the dataset
  - Each rule is characterized by:
    - Support – how many customers can be changed
    - Confidence – probability of changing a customer

  - **Traditional rules**:
    - Benchmark (1-3) AND Benchmark2 (7-9)
    - THEN Detractor → Promoter

- **Meta action mining**:
  - External, “higher-level” events that trigger changes in Benchmarks

- **Triggering**:
  - Benchmark1 (3-6) AND Benchmark2 (7-9)
  - THEN Detractor → Promoter

- **NPS impact calculation**:
  - Increase NPS by 9%

**RESULTS**

- **Web-based interface** for exploring results
- **Supporting recommendations for 38 heavy equipment repair companies**
- **Recommending improvement areas**
- **Choice between different optimal combinations of actions**
- **Quantifying the expected NPS Impact**
- **Feasibility assignment**
- **Attractiveness calculation**
- **Color-coding and dynamic update of charts**
- **Exploring raw text comments from customers in a recommended area**

**CONCLUSIONS**

- **CLIRS2** – new version of the system built from text-only data
- **Transforming text comments into structured table**
- **Mining actionable knowledge from sentiment table**

**FUTURE DIRECTIONS**

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