Customer Loyalty Improvement Recommender System (CLIRS)

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INTRODUCTION

- Net Promoter Score – a popular measure for customer loyalty
- Consulting collects 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

1. 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

2. Meta action mining:
   - External, “higher-level” events that trigger changes in benchmarks

3. Triggering:
   - Benchmark3 (3-8) AND Benchmark2 (7-9)
   - Mining detractor’s sentiment:

4. NPS Impact calculation
   - Recommendation

RESULTS

- Data preprocessing
- Feature extraction
- Clustering
- Datasets extension
- Action rule discovery
- Text mining
- Natural Language Processing
- Aspect-based sentiment analysis
- Building recommendation nodes according to strategy
- Data visualization for results
- Interactive result exploration

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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ACKNOWLEDGEMENTS

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