Filière Informatique de gestion
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Machine Learning-Based Recommendations for Streaming Media Content

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Summary

1. Alternative usage of machine learning-based recommender algorithm
2. Identify similar cultural groups with unknown user parameters
3. Collaborative recommender approach to overcome cultural diversity

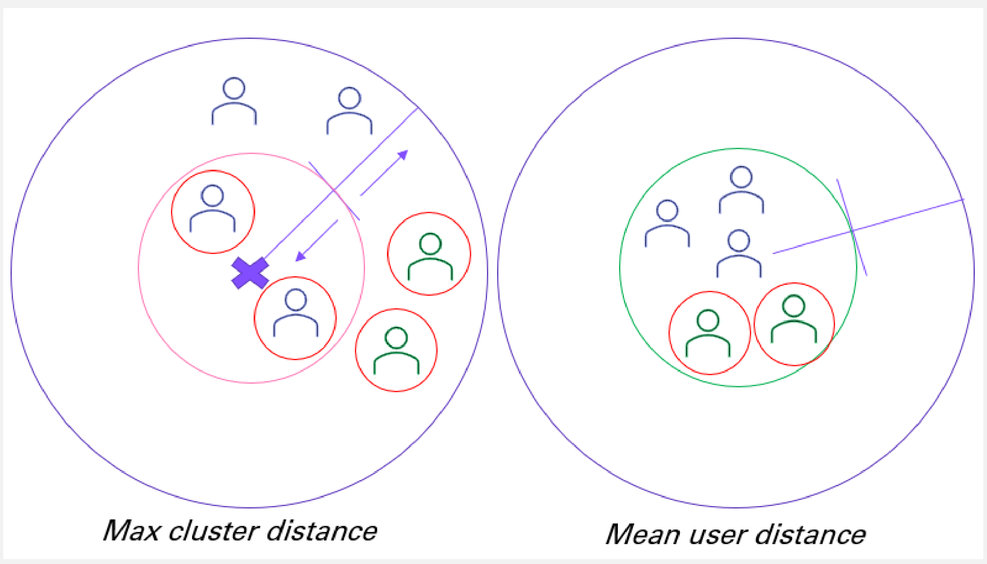
Introduction

- **Prototyping irregular recommender system with regular system components**
- **Identification of cultural groups with clustering algorithms**
- **Usage of collaborative filtering method**
- **Recommendation of content respecting both cultural diversity and personal preferences**

Methods

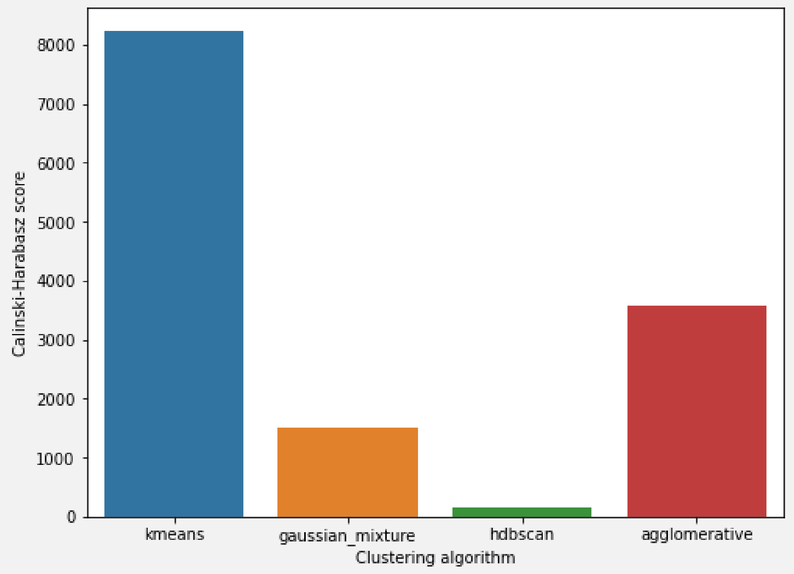
The proposed algorithm is composed of five steps:

1. **Data exploration and cleansing**
2. **Data transformation and feature extraction**
3. **Cluster analyses**
4. **Collaborative filtering**
5. **Content recommendations with two approaches**

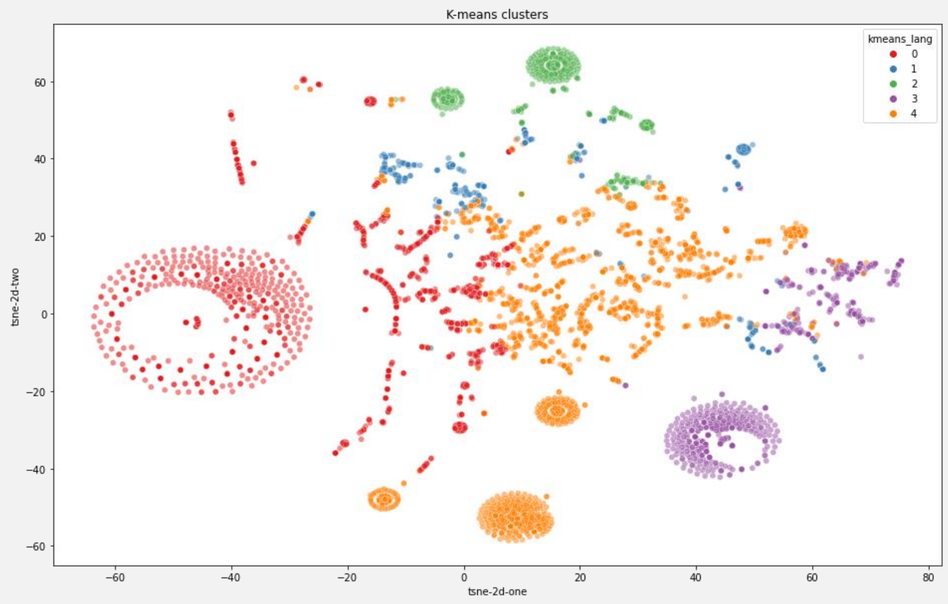


Results

Comparism of clustering algorithms



Identified cultural clusters



Evaluation

Test type	Cluster-based		User-based		User history
Cultural priority	True	False	True	False	N/A
Number of content	15.0	15.0	15.0	15.0	2.4
Mean Score	0.35	0.35	0.57	0.59	0.72
Diversity Score	686.57	652.13	498.8	442.71	0.7

Conclusions

The result indicates a feasible solution that respects cultural diversity and personalization
Deeper investigation of feature selection and correlation analyses would be interesting in future development

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