

Knowledge Graph Completion With TransE vs Boltzmann Machines

AUTHORS

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AFFILIATIONS

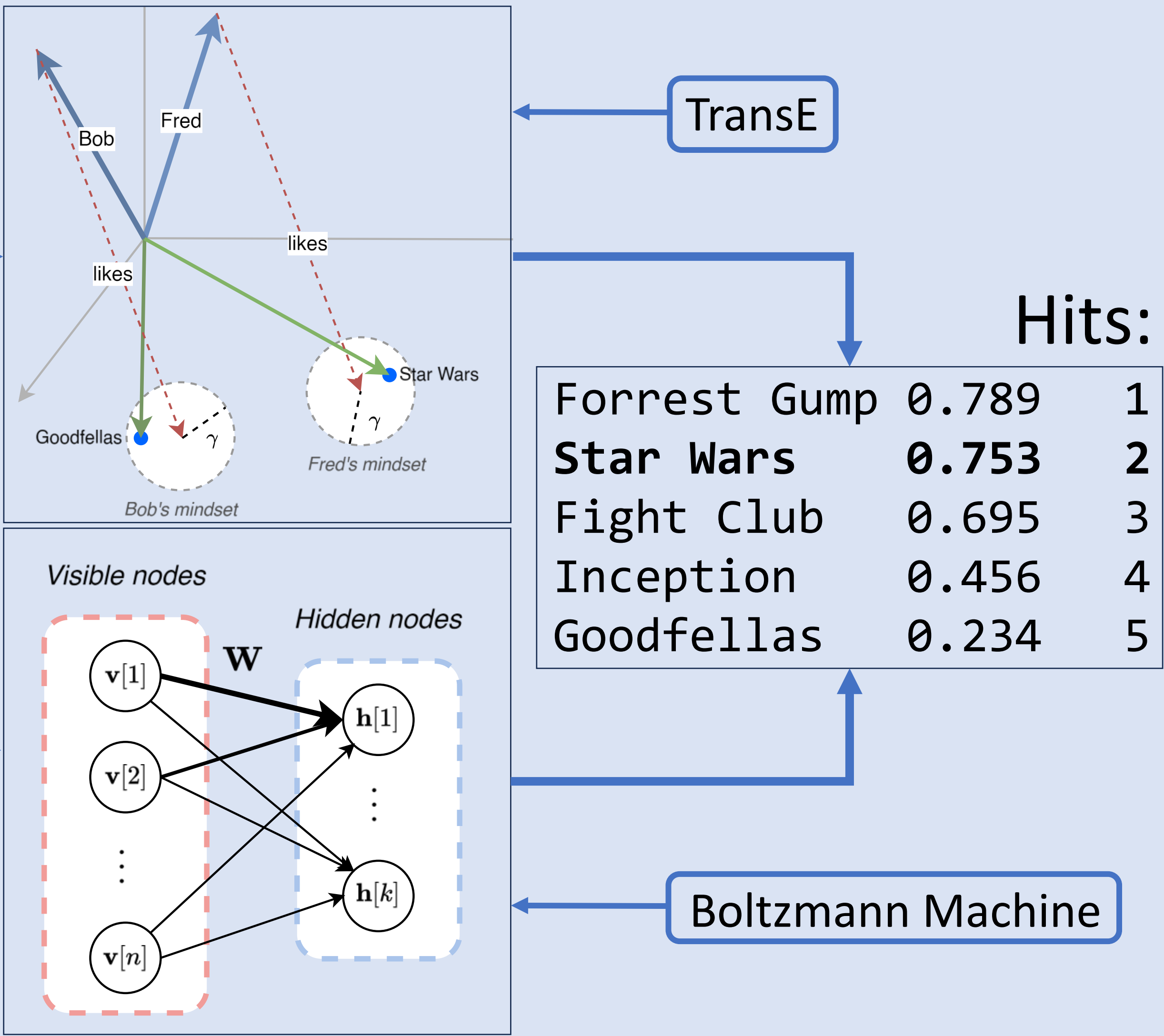
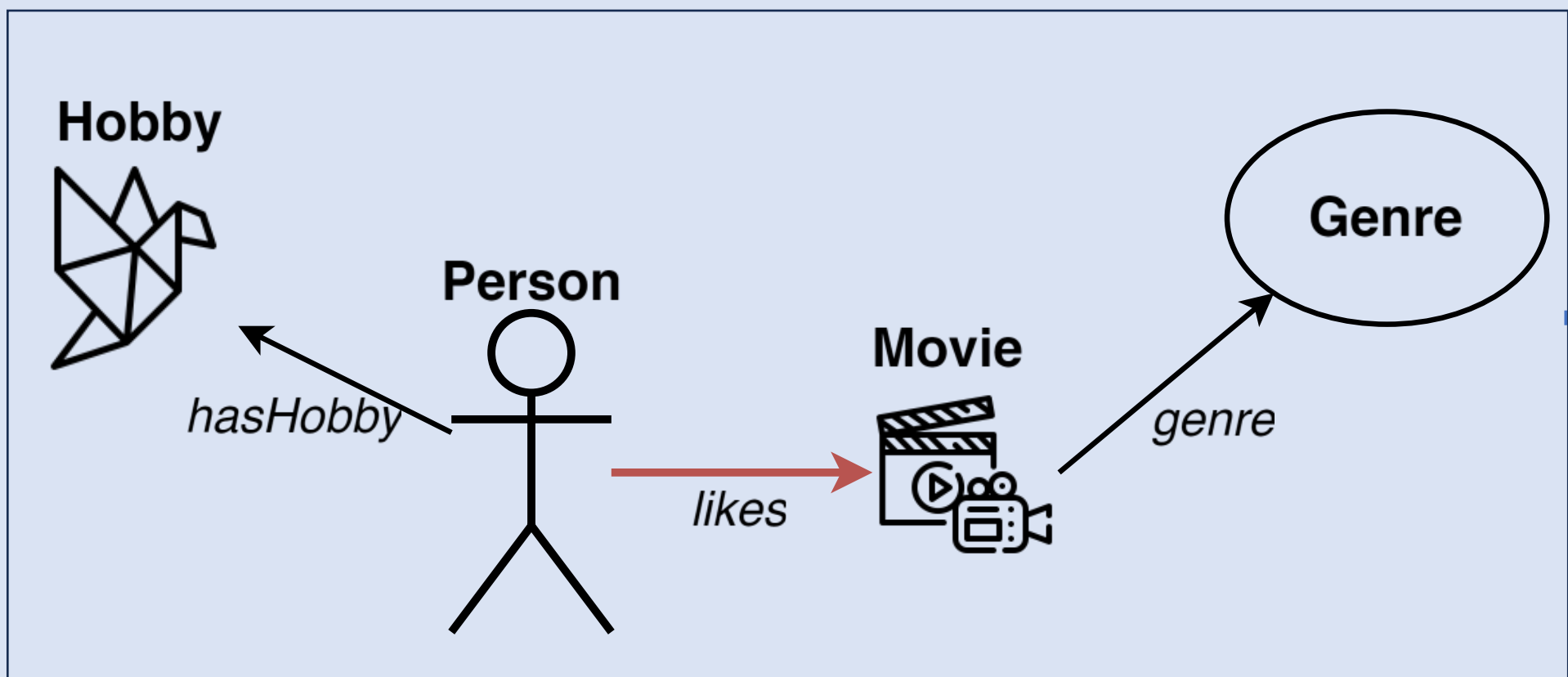
Technical University of Munich, TUM school of
Computation, Information and Technology
Bachelor Practical course in Data Engineering

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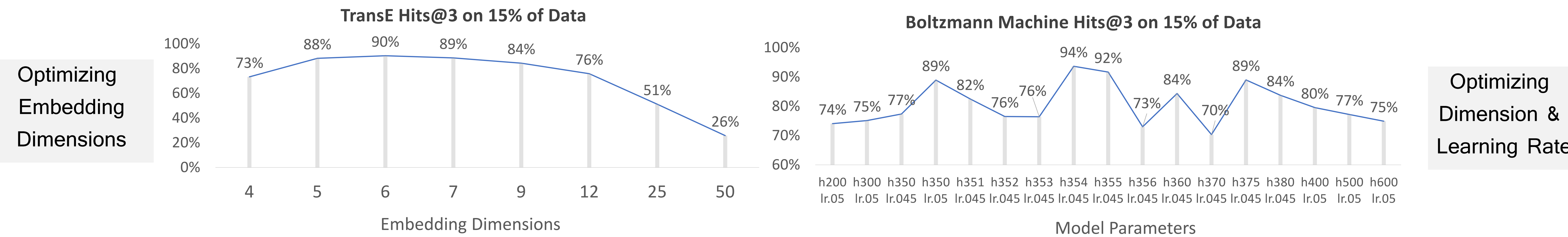
This project aims to explore ways to improve recommendation algorithms by using knowledge graph completion methods.

Approach

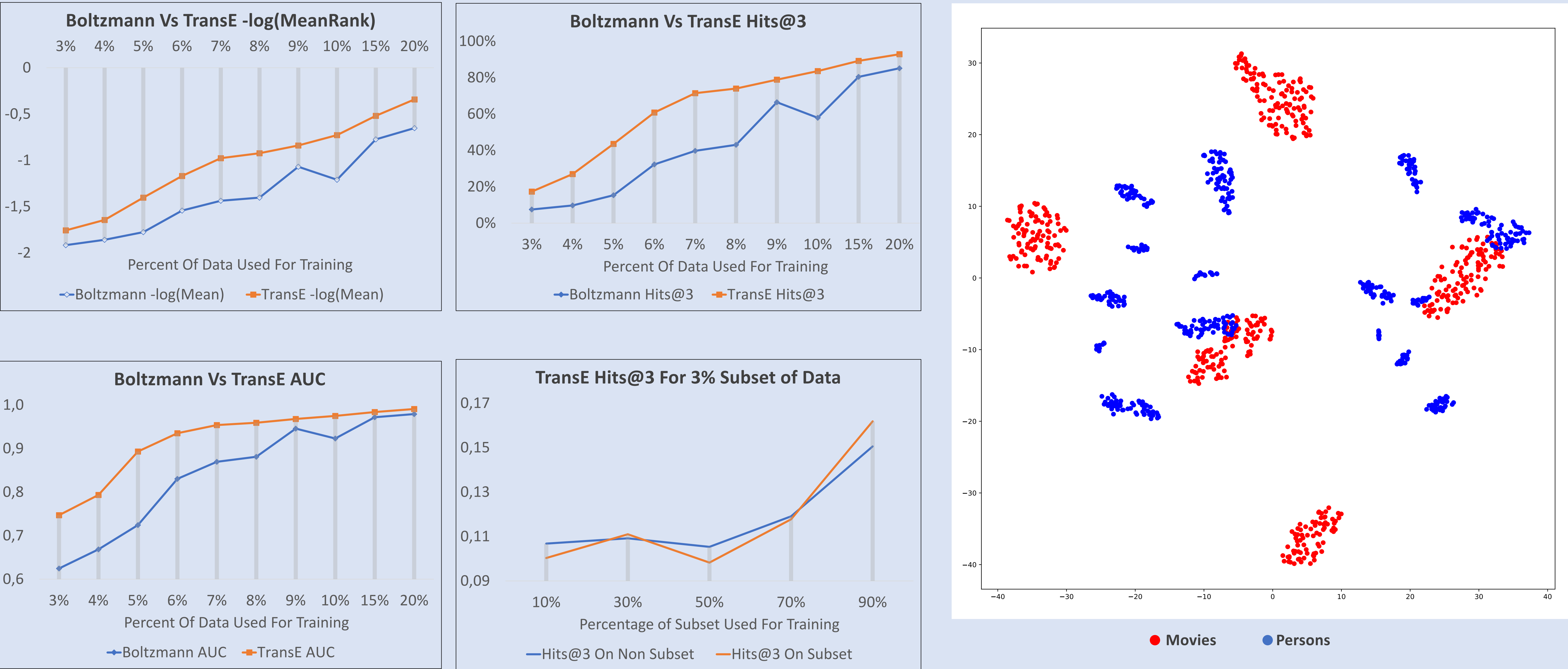
- Analyze and Split Data
- Train Models on Data
- Evaluate Models



Hyper-Parameter Tuning



Results:



Conclusion

- Training of TransE was far easier to handle and we were able to get it to perform better than Boltzmann
- With 9% of the original dataset, TransE can recreate it with 95% AUC score and 79% Hits@3

Future Work

We would attempt to improve the Boltzmann machine further to see if it could outperform TransE with more modifications