Rasoul Norouzi

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Education

PhD Candidate in Social Science (Expected completion: January 2027)

Department of Methodology and Statistics, University of Tilburg, Netherlands

Supervisors: Dr. Caspar van Lissa, Dr. Bennett Kleinberg, Prof. Dr. Jeroen Vermunt

Research Focus: My PhD research centers on enhancing theory development in social science through the integration of systematic text mining reviews with advanced computational models, specifically Large Language Models (LLMs) and Graph Neural Networks (GNNs). This approach is designed to overcome traditional biases by extracting and analyzing causal relationships from textual data, thereby facilitating the generation of innovative behavioral hypotheses and contributing to theory advancement with comprehensive, data-driven insights.

M.Sc. By Research in Information Technology (IT) (2016-2019)

University of Trabiat Modares Tehran, Tehran, Iran

Supervisor: Dr. Amir Albadvi

GPA: 17.74 out of 20 (above 88%)

Master Thesis Summary: My master's thesis introduced an innovative method combining ontology and multilabel classifiers to mitigate cold start and matrix sparsity issues in recommender systems, achieving enhanced accuracy in predicting user interests over traditional collaborative filtering models.

Teaching Experience

Teaching Assistant, Methodology and Statistics Department, Tilburg University, Tilburg, Netherlands

Computational Statistics with R Language (October 2023 - December 2023)

- Led the preparation of assignments and contributed to course material development for a Computational Statistics course.
- Actively engaged in answering student inquiries, clarifying course concepts, and solving programming challenges in R.

Research interests

- Interdisciplinary Research in AI and Social Sciences
- Text Mining and Machine Learning Applications in Theoretical Framework Development
- Data-driven Insights for Social Science Research

Technical Skills

Programming/Scripting Languages:

- **Python (Advanced):** Expert in machine learning and natural language processing packages, mathematical operations, data manipulation, and web scraping.
- **R** (**Intermediate**): Skilled in statistical computation, including simulations and hypothesis testing.
- **JavaScript** (**Intermediate**): Competent in writing functions, methods, objects, and implementing TensorFlow.js in browsers.

Tools/Software:

• Data Science & Machine Learning Tools: Proficient with Numpy, Pandas, Scipy, ScikitLearn, TensorFlow, Pytorch, NLTK, Huggingface, and Matplotlib for advanced data analysis and model development.

Web/DB Technologies:

• Basic Knowledge of Web Technologies: Familiar with React, HTML, CSS3, and SQL. Understands the basics of developing web applications, with limited experience in creating progressive web applications powered by machine learning algorithms.

Other Technical Skills:

• **Version Control with Git/GitHub**: Can work with version control operations including cloning, forking, pushing, and pulling.

Publications

- 1. **Norouzi, R.**, Kleinberg, B., Van Lissa, C. J., & Vermunt, J. (2024, April 10). Capturing Causal Claims: A Fine-Tuned Text Mining Model for Extracting Causal Sentences from Social Science Papers, Full Text
- 2. **Norouzi, Rasoul**, Hamed Baziyad, Elham Akhondzadeh, and Amir Albadvi. "Developing tourism users profiles with data-driven explicit information", <u>Full Text</u>
- 3. Seyed Mohammad Reza Hosseini, Hamed Baziyad, **Rasoul Norouzi** and et.al "Mapping the intellectual structure of GIS-T field (2008–2019) A dynamic co-word analysis." Scientometrics (2021), Full Text
- 4. Baziyad, Hamed, **Rasoul Norouzi**, and Amir Albadvi. "Mapping the Intellectual Structure of the Internet of Things (IoT) Field Based on Web Content: A Co-word Analysis." 4th International congress of Electrical, Computer and Mechanical Engineering. Full text
- 5. Baziyad, Hamed, Saeed Shirazi, Seyed Mohammad Reza Hosseini, and **Rasoul Norouzi**. "Mapping the intellectual structure of epidemiology with use of co-word analysis." Journal of Biostatistics and Epidemiology (2019). Full Text

References

Dr. Caspar van Lissa, Associate Professor, Department of Methodology and Statistics

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Dr. Bennett Kleinberg, Associate Professor, Department of Methodology and Statistics

Tilburg University | Bennett.Kleinberg@tilburguniversity.edu