University of Zagreb martin.tutek@gmail.com

MARTIN TUTEK

https://mttk.github.io/ Google Scholar

RESEARCH INTERESTS

Natural Language Processing, Faithful Explainability, Safe and Reliable AI

EMPLOYMENT

| EMPLOYMENT | |
|--|---------------------|
| Postdoctoral Researcher, University of Zagreb | Feb 2025 – Present |
| Postdoctoral Researcher, Technion | Feb 2024 – Feb 2025 |
| Postdoctoral Researcher, UKP Lab, Technische Universität Darmstadt | Sep 2022 – Dec 2023 |
| Research Consultant, European Commission, Joint Research Centre | Sep 2014 – Sep 2015 |
| EDUCATION | |
| Ph.D. In Computer Science, University of Zagreb | 2016 – 2022 |
| M.Sc. In Computer Science, University of Zagreb | 2012 – 2014 |
| B.Sc. In Computer Science, University of Zagreb | 2009 – 2012 |

Publications

SELECTED PUBLICATIONS

- [*] **Tutek, M.**, Hashemi Chaleshtori, F, Marasović, A, Belinkov, Y. (2025). <u>Measuring Faithfulness of Natural Language Explanations by Unlearning Reasoning Steps</u>. Under review.
- [*] Mueller*, A., Geiger*, A., Wiegreffe*, S., ..., **Tutek, M**., Zur, A, Bau, D., Belinkov, Y. (2025). MIB: <u>A Mechanistic Interpretability Benchmark</u>. ICML 2025.
- [*] **Tutek, M.** & Šnajder, J. (2020). <u>Staying True to Your Word:(How) Can Attention Become</u> <u>Explanation?</u>. In Proceedings of the 5th Workshop on Representation Learning for NLP (pp. 131-142).

PREPRINTS OR UNDER REVIEW

- [1] Bibhuti, A., Vashishtha, S., Naik, A., **Tutek, M.**, Aditya, S. (2025). PragWorld: A Benchmark Evaluating LLMs' local world model under Perturbations and Conversational Dynamics. Under review.
- [2] **Tutek, M.**, Hashemi Chaleshtori, F, Marasović, A, Belinkov, Y. (2025). <u>Measuring Faithfulness of Natural Language Explanations by Unlearning Reasoning Steps</u>. Under review.
- [3] Ashuach, T., Arad, D., Mueller, A., **Tutek, M.**, Belinkov, Y. (2025). CRISP: Persistent Concept Unlearning via Sparse Autoencoders. Under review.

PEER-REVIEWED PUBLICATIONS

- [4] Soker, Y., **Tutek, M.**, & Belinkov, Y. (2025). Predicting Success of Model Editing Through Intrinsic Features. Interplay workshop at COLM 2025.
- [5] Dukić, D., Barić, A., Čuljak, M., Jukić, J., **Tutek, M.** (2025). <u>Characterizing Linguistic Shifts in Croatian News via Diachronic Word Embeddings</u>. Slavic NLP workshop at ACL 2025.
- [6] Mueller*, A., Geiger*, A., Wiegreffe*, S., ..., **Tutek, M**., Zur, A, Bau, D., Belinkov, Y. (2025). <u>MIB: A Mechanistic Interpretability Benchmark</u>. ICML 2025.

- [7] Ashuach, T., **Tutek, M.**, & Belinkov, Y. (2024). <u>REVS: Unlearning Sensitive Information in Language Models via Rank Editing in the Vocabulary Space</u>. Findings of ACL 2025.
- [8] Puerto, H., **Tutek, M.**, Aditya, S., Zhu, X., & Gurevych, I. (2024). <u>Code Prompting Elicits</u> <u>Conditional Reasoning Abilities in Text+ Code LLMs</u>. EMNLP 2024.
- [9] Jelenić, F., Jukić, J., **Tutek, M.**, Puljiz, M., & Šnajder, J. (2024). <u>Out-of-Distribution Detection by</u> Leveraging Between-Layer Transformation Smoothness. ICLR 2024.
- [10] Sachdeva, R., **Tutek, M.**, & Gurevych, I. (2024). <u>CATFOOD: Counterfactual Augmented Training for Improving Out-of-Domain Performance and Calibration</u>. EACL 2024.
- [11] Jukić, J.*, **Tutek, M.***, & Šnajder, J. (2023). <u>Easy to Decide, Hard to Agree: Reducing Disagreements Between Saliency Methods</u>. Findings of ACL 2023 ***Equal contributions**.
- [12] **Tutek, M.**, & Snajder, J. (2022). <u>Toward Practical Usage of the Attention Mechanism as a Tool for Interpretability</u>. IEEE Access.
- [13] Obadić, L., **Tutek, M.**, & Šnajder, J. (2022). <u>NLPOP: a Dataset for Popularity Prediction of Promoted NLP Research on Twitter</u>. In Proceedings of the 12th Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis (pp. 286-292).
- [14] **Tutek, M.** & Šnajder, J. (2020). <u>Staying True to Your Word:(How) Can Attention Become</u> <u>Explanation?</u>. In Proceedings of the 5th Workshop on Representation Learning for NLP (pp. 131-142).
- [15] **Tutek, M.** & Šnajder, J. (2018). <u>Iterative Recursive Attention Model for Interpretable Sequence Classification</u>. In Proceedings of the 2018 EMNLP Workshop: Analyzing and interpreting neural networks for NLP.
- [16] di Buono, M. P., Šnajder, J., Dalbelo Bašić, B., Glavaš, G., **Tutek, M.**, & Milic-Frayling, N. (2017). <u>Predicting News Values from Headline Text and Emotions</u>. In 2017 EMNLP Workshop on Natural Language Processing Meets Journalism (pp. 1-6).
- [17] Rotim, L., **Tutek, M.**, & Šnajder, J. (2017, August). <u>Takelab at semeval-2017 task 5: Linear aggregation of word embeddings for fine-grained sentiment analysis of financial news</u>. In Proceedings of the 11th International Workshop on Semantic Evaluation (SemEval-2017) (pp. 866-871).
- [18] di Buono, M. P., **Tutek, M.**, Šnajder, J., Glavaš, G., Bašic, B. D., & Milic-Frayling, N. (2017). <u>Two</u> Layers of Annotation for Representing Event Mentions in News Stories. LAW XI 2017, 82.
- [19] **Tutek, M.**, Glavas, G., Šnajder, J., Milić-Frayling, N., & Dalbelo Basic, B. (2016, October). <u>Detecting and Ranking Conceptual Links between Texts Using a Knowledge Base</u>. In Proceedings of the 25th ACM International on Conference on Information and Knowledge Management (pp. 2077-2080).
- [20] **Tutek, M.**, Sekulić, I., Gombar, P., Paljak, I., Čulinović, F., Boltužić, F., Karan, M., Alagić, D. and Šnajder, J. (2016). <u>Takelab at semeval-2016 task 6: stance classification in tweets using a genetic algorithm based ensemble</u>. In Proceedings of the 10th International Workshop on Semantic Evaluation (SemEval-2016) (pp. 464-468).

Invited Talks

| The Cross-Disciplinary Impact of Transformers and LLMs | |
|---|----------|
| - FER, University of Zagreb | Jun 2025 |
| Using, Improving and Calibrating (Large) Language Models | |
| - CroAI Meetup | Mar 2024 |
| ChatGPT: What can large pre-trained language models say about the future? | |
| - CroAI Meetup | May 2023 |
| - IEEE Croatia, University of Zagreb | Dec 2022 |
| On interpretability: attention, saliency and beyond | |
| - Technion | Jun 2022 |

TEACHING

| 209719: Introduction to Artificial Intelligence, University of Zagreb | Summer 2025 |
|---|---------------------|
| 20-00-0947: Deep Learning for Natural Language Processing, TU Darmstadt | Summer 2023 |
| 252377: Deep Learning 1, University of Zagreb | Summer 2018-2021 |
| 222925: Text Analysis and Retrieval, University of Zagreb | Autumn 2018-2021 |
| 209719: Introduction to Artificial Intelligence, University of Zagreb | Summer 2016-2022 |
| MENTORING | |
| Technion MA Researchers (with Yonatan Belinkov) | |
| - Tomer Ashuach (now PhD at Technion) | Feb 2024 – present |
| - Yanay Soker | Feb 2024 – Sep 2024 |
| Darmstadt PhD Students (with Iryna Gurevych) | |
| - Haritz Puerto | Dec 2022 – Dec 2023 |
| - Rachneet Sachdeva | Sep 2022 – Oct 2023 |
| University of Zagreb PhD students (with Jan Šnajder) | |
| - Josip Jukić | Aug 2021 – present |
| Service | |

Organizing experience:

- BlackBoxNLP 2025 Shared task: benchmarking new techniques for localizing circuits and causal latent variables in language models (https://blackboxnlp.github.io/2025/task/)

Area Chair: Interpretability and Analysis of Models for NLP

- COLING 2024
- ACL Rolling Review

Dec 2023-current

- EMNLP 2023
- ACL 2023

Conference Reviewer

- AAAI 2026
- ICLR 2025
- COLM 2024, 2025
- NeurIPS 2024, 2025
- ARR Nov 2021 Oct 2023 (outstanding reviewer Oct 2023)
- EACL 2023
- EMNLP 2018 2022
- ACL 2018 2022

Journal Reviewer

- Automatika 2020, 2021
- Artificial Intelligence 2021, 2022

Workshop Reviewer

- L2M2 Workshop @ACL 2025
- Actionable Interpretability Workshop @ICML 2025
- Mechanistic Interpretability Workshop @ICML 2024
- BlackboxNLP @EMNLP 2018

Summer School Lecturer

Intl' Summer School of Data Science in Split, practical sessions. 2016, 2017

OPEN-SOURCE SOFTWARE AND DATASETS

- **Podium:** A framework agnostic python NLP library for data loading and preprocessing https://github.com/TakeLab/podium
- **RNN-classifier**: A minimalistic RNN classifier sample

https://github.com/mttk/rnn-classifier

- pytorch

Contributor

https://github.com/pytorch/pytorch

- pytorch-text

Contributor, maintainer

https://github.com/pytorch/text

REFERENCES

- Yonatan Belinkov, belinkov@technion.ac.il
- Jan Šnajder, <u>jan.snajder@fer.hr</u>
- Ana Marasović, <u>ana.marasovic@utah.edu</u>