

Furkan Şahinuç

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 [furkansahinuc](https://github.com/furkansahinuc) |  [furkan-sahinuc](https://www.linkedin.com/in/furkan-sahinuc) |  [Google Scholar](https://scholar.google.com/citations?user=furkansahinuc) |  [Semantic Scholar](https://www.semanticscholar.org/author/furkansahinuc)

Professional Experience

Ubiquitous Knowledge Processing Lab, Darmstadt, Germany

Doctoral Researcher (Wissenschaftlicher Mitarbeiter)

Nov 2023 - Jan 2026

- Built cost-efficient, domain-specific LLM evaluators with reinforcement learning (GRPO) that generalize across tasks and rival larger proprietary models. (Publications: [C11])

Project page: ukplab.github.io/acl2026-expert-rm

- Built a human-AI interaction simulation pipeline with proprietary and open-source LLMs for preference-based evaluation of expert-domain generation. (Publications: [P1])

Project page: ukplab.github.io/arxiv2025-expert-eval-rw

- Engineered a RAG-powered LLM system to extract meaningful content from complex domain-specific sources and convert it into well-structured, standardized output. (Publications: [C10])

Ubiquitous Knowledge Processing Lab, Darmstadt, Germany

Research Intern (Wissenschaftliche Hilfskraft)

Nov 2022 - Oct 2023

- Research on scientific texts using diverse evaluation metrics and LLMs in [InterText Group](#). (Publications: [C9])

ASELSAN Research Center, Ankara, Türkiye

Research and Development Engineer in NLP Team

June 2019 - Sep 2022

- Adapted NLP tools (tokenizers, encoder models, word embeddings, datasets) to Turkish (Publications: [J6], [J8], [C1], [C2], [C4])

- Built social-media analysis pipelines to detect hate speech, misinformation, and gender bias, developing classification models over 200.000 Turkish-English posts dataset. (Publications: [J6], [C2], [C3], [C5], [C6], [C7], [C8])

- Developed interpretability methods for word embeddings (Publications: [J1], [J5])

- Integrated signal-processing techniques into NLP models (Publications: [J7], [J9])

Education

ELLIS Ph.D. Program, Computer Science

2023 -

Technical University of Darmstadt, Darmstadt, Germany (Main site)

Supervisor: Prof. Iryna Gurevych

University of Birmingham, Birmingham, UK (Exchange: Mar 2026 - Aug 2026)

Co-Supervisor: Asst. Prof. Yue Feng

M.Sc., Electrical and Electronics Engineering

2019 - 2021

Bilkent University, Ankara, Türkiye

(GPA: 3.68/4.00)

Supervisor: Asst. Prof. Aykut Koç

Co-supervisor: Prof. Haldun Ozaktas

Thesis title: *Disclosing Zipfian Regularities in Semantic Breadth of Words via Multimodal Gaussian Embeddings.*

B.S., Electrical and Electronics Engineering

2014 - 2019

Bilkent University, Ankara, Türkiye

(GPA: 3.71/4.00)

Publications

Conference Proceedings

- [C11] **F. Şahinuç**, S. Dutta, and I. Gurevych. (2026). [Reward Modeling for Scientific Writing Evaluation](#). In *ACL (Volume 1: Long Papers)*.
- [C10] **F. Şahinuç**, T. T. Tran, Y. Grishina, Y. Hou, B. Chen, and I. Gurevych. (2024). [Efficient Performance Tracking: Leveraging Large Language Models for Automated Construction of Scientific Leaderboards](#). In *EMNLP*.
- [C9] **F. Şahinuç**, I. Kuznetsov, Y. Hou, and I. Gurevych. (2024). [Systematic Task Exploration with LLMs: A Study in Citation Text Generation](#). In *ACL (Volume 1: Long Papers)*.
- [C8] C. Toraman, O. Ozcelik, **F. Şahinuç**, and F. Can. (2024). [MiDe22: An Annotated Multi-Event Tweet Dataset for Misinformation Detection](#). In *LREC-COLING*.
- [C7] C. Toraman, **F. Şahinuç**, and E. H. Yilmaz. (2022). [Large-scale Hate Speech Detection with Cross-domain Transfer](#). In *LREC*.
- [C6] C. Toraman, **F. Şahinuç**, and E. H. Yilmaz. (2022). [BlackLivesMatter2020: An Analysis of Deleted and Suspended Users in Twitter](#). In *ACM Web-Sci*.
- [C5] C. Toraman, O. Ozcelik, **F. Şahinuç**, and U. Sahin. (2022). [ARC-NLP at CheckThat! 2022: Contradiction for Harmful Tweet Detection](#). In *CLEF 2022*.
- [C4] O. Ozcelik, E. H. Yilmaz, **F. Şahinuç**, and C. Toraman. (2022). [Slot Filling for Voice Assistants](#). In *SIU*.
- [C3] **F. Şahinuç** and C. Toraman. (2021). [Tweet Length Matters: A Comparative Analysis on Topic Detection in Microblogs](#). In *ECIR*.
- [C2] **F. Şahinuç**, C. Toraman, and A. Koç. (2021). [Topic Detection Based on Deep Learning Language Model in Turkish Microblogs](#). In *SIU*.
- [C1] **F. Şahinuç**, V. Yücesoy, and A. Koç. (2020). [Intent Classification and Slot Filling for Turkish Dialogue Systems](#). In *SIU*.

Journal Articles

- [J9] N. Sevim, E. O. Ozyedek, **F. Şahinuç**, T. Ozates, and A. Koç. (2025). [Fast-FNet: Accelerating Transformer Encoder Models via Efficient Fourier Layers](#). *Signal, Image and Video Processing*, 19(12).
- [J8] C. Toraman, **F. Şahinuç**, E. H. Yilmaz, and O. Ozcelik. (2023). [Impact of Tokenization on Language Models: An Analysis for Turkish](#). *ACM TALLIP*, 22(4).
- [J7] **F. Şahinuç** and A. Koç. (2022). [Fractional Fourier Transform Meets Transformer Encoder](#). *IEEE Signal Processing Letters*, 29.
- [J6] **F. Şahinuç**, E. H. Yilmaz, C. Toraman, and A. Koç. (2022). [The Effect of Gender Bias on Hate Speech Detection](#). *Signal, Image and Video Processing*.
- [J5] L. K. Şenel, **F. Şahinuç**, V. Yücesoy, H. Schütze, T. Çukur and A. Koç. (2022). [Learning Interpretable Word Embeddings via Bidirectional Alignment of Embedding Dimensions with Semantic Concepts](#). *Information Processing & Management*, 59(3).
- [J4] N. Sevim, **F. Şahinuç**, and A. Koç. (2022). [Gender Bias in Legal Corpora and Debiasing it](#). *Natural Language Engineering*, 29(2).

- [J3] C. Toraman, **F. Şahinuç**, E. H. Yilmaz, and I. B. Akkaya. (2022). [Understanding Social Engagements: A Comparative Analysis of User and Text Features in Twitter](#). *Social Network Analysis and Mining*, 12(47).
- [J2] **F. Şahinuç** and A. Koç. (2021). [Zipfian Regularities in Non-point Word Representations](#). *Information Processing & Management*, 58(3).
- [J1] L. K. Şenel, I. Utlu, **F. Şahinuç**, H. M. Ozaktas, and A. Koç. (2020). [Imparting Interpretability to Word Embeddings While Preserving Semantic Structure](#). *Natural Language Engineering*, 27(6).

Preprints

- [P1] **F. Şahinuç**, S. Dutta, and I. Gurevych. (2025). [Expert Preference-based Evaluation of Automated Related Work Generation](#). *arXiv:2508.07955*.

Student Supervision

- Niklas Traser, M.Sc. Thesis, *Semantic Graphs and Related Work Generation*, Technical University of Darmstadt, 2025.
- Shuqi Zhang, M.Sc. Thesis, *Enhancing Synthetic Related Work Paragraphs through LLM Revision*, Technical University of Darmstadt, 2024.
- Jakob Wölfe, B.S. Thesis, *Evaluating the Effectiveness of LLMs as Virtual Research Assistants*, Technical University of Darmstadt, 2024.

Skills

Languages: Turkish (Native), English (Full professional)

Programming: Python, C, C++, Java, MATLAB

ML & Data: PyTorch, Hugging Face (Transformers, TRL), Unsloth, vLLM, scikit-learn, Weights & Biases

APIs: OpenAI, Azure OpenAI

Tools: L^AT_EX, HTML, Git

Awards - Honors

- ELIZA Exchange Scholarship, DAAD (€8200)
- Best Paper Award: *The Effect of Gender Bias on Hate Speech Detection*. 30th IEEE Signal Processing and Communications Applications Conference (SIU), 2022.
- Ranked 1st in Turkish Harmful Tweet Detection Competition at 2022 CheckThat! Lab on Fighting the COVID-19 Infodemic and Fake News Detection.
- Full Scholarship, Bilkent University (B.S., M.Sc.)
 - High Honor List (×6) & Honor List (×2)
- Top 0.003% (59th of 2,000,000) in Turkey’s nationwide university entrance exam, 2014.
- Top Scoring Student (96.38/100), Suleyman Demirel Science High School, Afyonkarahisar, Turkey, 2014