Furkan Şahinuç

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WORK EXPERIENCE

Research Intern at Ubiquitous Knowledge Processing Lab - TU Darmstadt   Nov 2022 - Oct 2023

- Studied related work generation in InterText Group.

Research Engineer at ASELSAN Research Center NLP Team   June 2019 - Sep 2022

- Studied hate speech detection, misinformation detection in social media.
- Other research topics are interpretability of word embeddings, signal processing tools in NLP, gender bias.

EDUCATION

2023 -	**Ph.D.**, Ubiquitous Knowledge Processing Lab - TU Darmstadt, Computer Science. **Advisor:** Prof. Dr. Iryna Gurevych	
2019 - 2021	**M.Sc.,** Bilkent University, Electrical and Electronics Engineering. **Advisor:** Asst. Prof. Aykut Koç, Co-advisor: Prof. Haldun Ozaktas **Thesis title:** *Disclosing Zipfian Regularities in Semantic Breadth of Words via Multimodal Gaussian Embeddings.*	(GPA: 3.68/4.00)
2014 - 2019	**B.S.,** Bilkent University, Electrical and Electronics Engineering.	(GPA: 3.71/4.00)
2010 - 2014	**High School**, Suleyman Demirel Science High School.	(GPA: 96.38/100)

PUBLICATIONS

Conference Proceedings

Cagri Toraman, Oguzhan Ozcelik, **Furkan Şahinuç**, and Fazli Can (2024). "MiDe22: An Annotated Multi-Event Tweet Dataset for Misinformation Detection". In: *Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024)*. Torino, Italia: ELRA and ICCL, pp. 11283–11295. URL: https://aclanthology.org/2024.lrec-main.986.

Furkan Şahinuç, Ilia Kuznetsov, Yufang Hou, and Iryna Gurevych (2024). "Systematic Task Exploration with LLMs: A Study in Citation Text Generation". In: *Proceedings of the 62nd Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*. Bangkok, Thailand: Association for Computational Linguistics, pp. 4832–4855. URL: https://aclanthology.org/2024.acl-long.265.

Cagri Toraman, **Furkan Şahinuç**, and Eyup Halit Yilmaz (2022a). "BlackLivesMatter2020: An Analysis of Deleted and Suspended Users in Twitter". In: *14th ACM Web Science Conference 2022*. Association for Computing Machinery, pp. 290–295. DOI: 10.1145/3501247.3531539.

Cagri Toraman, **Furkan Şahinuç**, and Eyup Halit Yilmaz (2022b). "Large-Scale Hate Speech Detection with Cross-Domain Transfer". In: *Proceedings of the Language Resources and Evaluation Conference*. European Language Resources Association, pp. 2215–2225. URL: https://aclanthology.org/2022.lrec-1.238.

Cagri Toraman, Oguzhan Ozcelik, **Furkan Şahinuç**, and Umitcan Sahin (2022). "ARC-NLP at CheckThat! 2022: Contradiction for Harmful Tweet Detection". In: *Working Notes of CLEF 2022 - Conference and Labs of the Evaluation Forum*. CLEF'2022. Bologna, Italy. URL: http://ceur-ws.org/Vol-3180/paper-59.pdf.

Oguzhan Ozcelik, Eyup Halit Yilmaz, **Furkan Şahinuç**, and Cagri Toraman (2022). "Slot Filling for Voice Assistants". In: *2022 30th Signal Processing and Communications Applications Conference (SIU)*, pp. 1–4. DOI: 10.1109/SIU55565.2022.9864737.

Furkan Şahinuç and Cagri Toraman (2021). "Tweet Length Matters: A Comparative Analysis on Topic Detection in Microblogs". In: *Advances in Information Retrieval*. Cham: Springer International Publishing, pp. 471–478. DOI: 10.1007/978-3-030-72240-1_50.

Furkan Şahinuç, Cagri Toraman, and Aykut Koç (2021). "Topic Detection based on Deep Learning Language Model in Turkish Microblogs". In: *2021 29th Signal Processing and Communications Applications Conference (SIU)*, pp. 1–4. DOI: 10.1109/SIU53274.2021.9477781.

Furkan Şahinuç, Veysel Yücesoy, and Aykut Koç (2020). "Intent Classification and Slot Filling for Turkish Dialogue Systems". In: *2020 28th Signal Processing and Communications Applications Conference (SIU)*, pp. 1–4. DOI: 10.1109/SIU49456.2020.9302308.

Journal Articles

Cagri Toraman, Eyup Halit Yilmaz, **Furkan Şahinuç**, and Oguzhan Ozcelik (2023). "Impact of Tokenization on Language Models: An Analysis for Turkish". In: *ACM Transactions on Asian and Low-Resource Language Information Processing* 22.4. DOI: 10.1145/3578707.

Cagri Toraman, **Furkan Şahinuç**, Eyup Halit Yilmaz, and Ibrahim Batuhan Akkaya (2022). "Understanding Social Engagements: A Comparative Analysis of User and Text Features in Twitter". In: *Social Network Analysis and Mining* 12.47. DOI: 10.1007/s13278-022-00872-1.

Furkan Şahinuç and Aykut Koç (2022). "Fractional Fourier Transform Meets Transformer Encoder". In: *IEEE Signal Processing Letters* 29, pp. 2258–2262. DOI: 10.1109/LSP.2022.3217975.

Furkan Şahinuç, Eyup Halit Yilmaz, Cagri Toraman, and Aykut Koç (2022). "The Effect of Gender Bias on Hate Speech Detection". In: *Signal, Image and Video Processing*. DOI: 10.1007/s11760-022-02368-z.

L. Kerem Şenel, **Furkan Şahinuç**, Veysel Yücesoy, Hinrich Schütze, Tolga Çukur, and Aykut Koç (2022). "Learning Interpretable Word Embeddings via Bidirectional Alignment of Embedding Dimensions with Semantic Concepts". In: *Information Processing & Management* 59.3, p. 102925. DOI: 10.1016/j.ipm.2022.102925.

Nurullah Sevim, **Furkan Şahinuç**, and Aykut Koç (2022). "Gender Bias in Legal Corpora and Debiasing It". In: *Natural Language Engineering* 29.2, pp. 449–482. DOI: 10.1017/S1351324922000122.

Furkan Şahinuç and Aykut Koç (2021). "Zipfian Regularities in Non-point Word Representations". In: *Information Processing & Management* 58.3, p. 102493. DOI: 10.1016/j.ipm.2021.102493.

L. Kerem Şenel, İhsan Utlu, **Furkan Şahinuç**, Haldun M. Ozaktas, and Aykut Koç (2020). "Imparting Interpretability to Word Embeddings while Preserving Semantic Structure". In: *Natural Language Engineering* 27.6, pp. 721–746. DOI: 10.1017/S1351324920000315.

Arxiv Preprints

Nurullah Sevim, Ege Ozan Özyedek, **Furkan Şahinuç**, and Aykut Koç (2022). *Fast-FNet: Accelerating Transformer Encoder Models via Efficient Fourier Layers*. URL: https://arxiv.org/abs/2209.12816.

SKILLS

Languages	Turkish (Native), English (TOEFL: 96)
Coding	Python (Experience in PyTorch and Huggingface libraries), C, C++, Java, MATLAB, LaTeX

HONORS

Ranked 1st in Turkish Harmful Tweet Detection Competition at 2022 CheckThat! Lab on Fighting the COVID-19 Infodemic and Fake News Detection.

High Honor List (×6), Semester GPA > 3.5/4.0.

Honor List (×2), 3.0/4.0 < Semester GPA < 3.5/4.0.

Full Scholarship, Bilkent University along with B.S., M.Sc. education.

Ranked 59th among 2 million examinees in the nationwide university entrance examinations, Turkey, 2014.

Top Scoring Student, Suleyman Demirel Science High School, Afyonkarahisar, Turkey, 2014.