Buse Çarık

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RESEARCH AREAS

Human-Computer Interaction, Natural Language Processing, Accessibility, Computational Social Science

EDUCATION

Ph.D. in Computer Science, Virginia Tech, Blacksburg, VA   *Jan. 2023 - Present*
Advised by Dr. Eugenia H. Rho

M.Sc. in Computer Science, Sabanci University, Istanbul   *Sept. 2020 - Dec. 2022*
Advised by Dr. Reyyan Yeniterzi

B.Sc. in Computer Science, Sabanci University, Istanbul   *Sept. 2015 - Jan. 2020*
Minor in Psychology
Graduated with honors (Magna Cum Laude)

Erasmus Program, Uppsala University, Uppsala   *Jan. 2019 - Jun. 2019*

JOURNALS AND CONFERENCE PUBLICATIONS

[2025a] **Reimagining Support: Exploring Autistic Individuals' Visions for AI in Coping with Negative Self-Talk**
Buse Çarık, Victoria Izaac, Xiaohan Ding, Angela Scarpa, Eugenia Rho.
ACM Conference on Human Factors in Computing Systems (CHI), 2025

[2025b] **Linguistic Determinants of Effective Counterspeech: Strategies for Responding to Online Hate Speech**
Buse Çarık, Kaike Ping, Xiaohan Ding, and Eugenia H. Rho.
Proceedings of the National Academy of Sciences (PNAS), 2025 (Under Review)

[2025c] **Exploring Large Language Models Through a Neurodivergent Lens: Use, Challenges, Community-Driven Workarounds, and Concerns**
Buse Çarık, Kaike Ping, Xiaohan Ding, Eugenia H. Rho.
ACM International Conference on Supporting Group Work (GROUP), 2025

[2025d] **How Managers Perceive AI-Assisted Conversational Training for Workplace Communication**
Lance T Wilhelm, Xiaohan Ding, Kirk McInnis Knutsen, **Buse Çarık**, Eugenia H. Rho.
ACM International Conversational User Interfaces (CUI), 2025 (Accepted)

[2024] **Leveraging Prompt-Based Large Language Models: Predicting Pandemic Health Decisions and Outcomes Through Social Media Language**
Xiaohan Ding, **Buse Çarık**, Uma Sushmitha Gunturi, Valerie Reyna, Eugenia H. Rho.
ACM Conference on Human Factors in Computing Systems (CHI), 2024

[2022a] **A Twitter Corpus for Named Entity Recognition in Turkish**
Buse Çarık & Reyyan Yeniterzi.
In Proceedings of the Thirteenth Language Resources and Evaluation Conference (LREC), 2022

[2022b] **A Turkish Hate Speech Dataset and Detection System**
Fatih Beyhan, **Buse Çarık**, Inanç Arın, Ayşecan Terzioğlu, Berrin Yanıkoğlu, Reyyan Yeniterzi.
In Proceedings of the Thirteenth Language Resources and Evaluation Conference (LREC), 2022

WORKSHOP PAPERS

[2022] SU-NLP at SemEval-2022 Task 11: Complex Named Entity Recognition with Entity Linking
Buse Çarık, Fatih Beyhan, Reyyan Yeniterzi.
In Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval), 2022

[2021] SU-NLP at CheckThat! 2021: Check-Worthiness of Turkish Tweets
Buse Çarık & Reyyan Yeniterzi.
In CLEF (Working Notes), 2021

RESEARCH EXPERIENCE

SAIL Lab, Virginia Tech – Research Assistant   *Jan. 2023 - Present*
Advisor: Eugenia H. Rho
Designing a neuro-affirming AI system to support autistic adults in managing negative self-talk through multimodal interaction.
Analyzing text-based conversations between autistic and neurotypical individuals to understand communication dynamics and inform inclusive AI design.

SUNLP, Sabanci University – Research Assistant   *Nov. 2021 - Nov. 2022*
Project: End-to-end Neural Entity Linking System with Entitypedia and EntityBERT
PI: Reyyan Yeniterzi
Implemented entity linking to match social media content with relevant news articles.
Developed NER models for Turkish news and social media text using neural architectures.

The Scientific and Technological Research Council of Turkey – Research Assistant   *Mar. 2020 - Mar. 2021*
Project: Deep Learning-Based Hate Speech Detection in Turkey and Tunisia
PI: Berrin Yanıkoğlu, Reyyan Yeniterzi, Ayşecan Terzioğlu
Created the first Turkish hate speech dataset and developed cross-cultural models for Turkey and Tunisia using neural and transformer-based architectures.

AWARDS & HONORS

VT Autism Clinic & Center for Autism Research Student Fellowship   *Oct. 2024*
Competitive fellowship awarded for the research proposal "Developing Human-AI Interaction Strategies to Support Autistic Adults in Coping with Negative Self-Talk."

TÜBİTAK Graduate Fellowship   *Sept. 2021 – Dec. 2022*
National scholarship awarded by The Scientific and Technological Research Council of Turkey for academic excellence in graduate studies.

Sabancı University Full Tuition Scholarship   *Sept. 2015 – Dec. 2022*
Merit-based institutional scholarship covering tuition for both undergraduate and graduate studies.

INVITED TALKS

Designing Neuro-Affirming Human-AI Interactions for Coping with Negative Self-Talk in Autistic Adults   *Mar. 2025*
Virginia Tech Center for Autism Research – Biennial Spring Autism Conference

Designing Multimodal AI Tools to Support Autistic Adults with Negative Self-Talk   *Feb. 2025*
Virginia Tech Center for Human-Computer Interaction (CHCI) Seminar

Supporting Mental Health in Neurodiverse Communities: Enhancing LLM Accessibility through Multimodal Human-AI Interactions   *Nov. 2023*
Symposium on the Human-Centered Future of Work, Virginia Tech

TEACHING EXPERIENCE

Introduction to Python Programming, Virginia Tech
Spring 2025
Contributed to course materials and programming assignments

Introduction to Software Design, Virginia Tech
Fall 2024
Led lab sessions of 35 students on the implementation of software design assignments

Introduction to Problem Solving, Virginia Tech
Fall 2023
Contributed to course materials and programming assignments (Python)

Advanced Machine Learning (Graduate Level), Virginia Tech
Fall 2023
Contributed to course materials and programming assignments (Java)

Natural Language Processing, Sabanci University
Spring 2022
Designed course materials and programming assignments

Computational Approaches to Problem Solving, Sabanci University
Fall 2021
Led weekly problem-solving sessions of 30 students

Machine Learning, Sabanci University
Fall/Spring 2020/21
Led problem-solving sessions of 120 students on the implementation of machine learning algorithms
Designed course materials and programming assignments

SERVICE

Academic Service
Reviewer: CHI 2025 / CSCW 2024–2025 / GROUP 2025

Outreach and Leadership
Organizing Committee: Women in Data Science, Istanbul
2021

University Representative, Sabanci University
Presented research and university experience to high school students
2019

Undergraduate Mentor, Sabanci University
Supported students in coursework and academic planning
2017