

EDUCATION

Sabanci University, Istanbul, Turkey

Feb. 2022 - Present

M.Sc., Computer Science and Engineering

Thesis: Developing Turkish Language Models on Social Media

Advisor: Assistant Prof. Onur Varol

CGPA: 3.71/4.0

University Of Tabriz, Tabriz, Iran

Sept. 2017 - Sept. 2021

B.Sc., Computer Science and Engineering

CGPA: 16.58/20

PUBLICATIONS

GOOGLE SCHOLAR

CITATIONS: 16

H-INDEX: 3

Journal Articles

J.3 **Najafi, A.**, and Onur Varol. **"Turkishbertweet: Fast and reliable large language model for social media analysis."** Expert Systems with Applications 255 (2024): 124737.

J.2 **Najafi, A.**, et al. **"First public dataset to study 2023 Turkish general election."** Scientific Reports 14 (2024).

J.1 **Najafi, A.**, Gholipour-Shilabin, A., Dehkharghani, R. et al. **ComStreamClust: a Communicative Multi-Agent Approach to Text Clustering in Streaming Data.** Ann. Data. Sci. (2022)

Refereed Conference Proceedings

C.2 Yener, Alp Önder, **Ali Najafi**, and Onur Varol. **"City-level User Location Detection from Social Media and Analysis of Political Participation."** 2024 32nd Signal Processing and Communications Applications Conference (SIU). IEEE, 2024.

C.1 **Najafi, Ali**, and Onur Varol. **"VRLLab at HSD-2Lang 2024: Turkish Hate Speech Detection Online with TurkishBERTweet."** Proceedings of the 7th Workshop on Challenges and Applications of Automated Extraction of Socio-political Events from Text (CASE 2024). 2024.

CONDUCTED
RESEARCH AND
ACADEMIC
EXPERIENCE

VRLLAB, Istanbul, Turkey

Sept, 2022 - Present

– **TurkishBERTweet**

- * Achieved almost 10% significant improvement in the F1-Score of Text Classification Tasks
- * Developed classification pipelines for Sentiment Analysis and Hate Speech Detection Tasks
- * Trained TurkishBERTweet From Scratch
- * Used Google TPUs for Training the Language Model
- * Trained BPE tokenizer from scratch on 900M Turkish Twitter Data

– **Turkish Election Dataset**

- * Analyzed the Retweet Speed of specific Turkish Politicians for different time spans of election day
- * Conducted network analysis of politicians on Twitter using Networkx and Gephi
- * Analyzed the followers of politicians to identify social bots using Botometer

– **CON-NET** under CHIST-ERA call funded by EU and TUBITAK

- * Integrating CONtent and NETwork structure for detecting, understanding, and mitigating online misbehaviour
- * Building multimodal machine learning systems for estimating automated activities

INVITED

LECTURER AND TALKS

1. Presented "VRLLab at HSD-2Lang 2024: Turkish Hate Speech Detection Online with TurkishBERTweet." paper in , May 2023
2. Presented "#Secim2023: First Public Dataset for Studying Turkish General Election." paper in Turkey Computational Social Sciences Conference (TCSS) 2023, Koc University, Turkey.
3. Applications of Large Language Models for Social Scientists, Political Science Course, Sabanci University, Dr. Fatih Serkant Adiguzel, Fall 2023
4. Natural Languages for Social Scientists, Summer Institutes in Computational Social Science (SICSS), Ozyegin University, Turkey, Summer 2023

TEACHING EXPERIENCE

Sabanci University - Faculty of Engineering and Natural Sciences

CS210: Introduction to Data Science

June. 2023 - Feb. 2024

CS412: Machine Learning

Feb. 2024 - June. 2024

CS210: Introduction to Data Science

Feb. 2023 - June. 2023

CS412: Machine Learning

June. 2022 - Feb. 2023

CS210: Introduction to Computing

Feb. 2022 - June. 2022

COMPUTER AND LANGUAGE SKILLS

Skills:

Programming Languages: Python, C++, Java

Frameworks: Pytorch, Tensorflow, Keras, Flax, Django

Librares: Matplotlib, Seaborn, Pandas, Numpy, Gephi, NetworkX, OpenCV, Jax, Docker

DataBase: SQL, NoSQL (Redis)

Familiar with GCP, AWS, L^AT_EX, HTML, CSS, JS

Languages: English (Fluent), Persian (Native), Azerbaijani (Native), Turkish (Fluent)

HONORS AND AWARDS

Hate Speech Detection in Turkish - EACL"2024

Jan. 2024

Earned **3rd** Rank among 11 participated teams

TUBITAK Scholarship

Aug. 2023 - Present

The Scientific and Technological Research Council of Turkey, Turkey

Awarded to full tuition waiver and a monthly stipend as a researcher in a project funded by TUBITAK

Sabanci University Scholarship

Feb. 2022 - Aug 2023

Sabanci University, Istanbul, Turkey

Awarded a 100% tuition scholarship and a monthly stipend as a Teaching Assistant