

MEHRDAD HESHMAT

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RESEARCH INTERESTS	I work at the intersection of NLP and psychology, with a focus on autobiographical memory narratives: span-level detail extraction, and the evaluation of LLMs as measurement instruments for psychological tasks.		
EDUCATION	Master of Science in Computer Science & Engineering	2024 - Present	
	<u>Sabancı University</u>		
	• Overall GPA: 3.71		
	• Selected Courses: Machine Learning, Deep Learning, Network Science		
	Bachelor of Science in Computer Engineering	2019 - 2023	
	<u>Urmia University</u>		
	• Overall GPA: 18.73 / 20.00 (3.87 / 4.0)		
	• Selected Courses: Machine Learning: 20/20, Artificial Intelligence: 20/20, Information Retrieval: 20/20, Data Mining: 20/20		
PUBLICATIONS	[p1] Muğurtay, N., Şirin, K. G., Heshmat Najafabad, M. , Kahya, A. T., Yılmaz, F. G., Zouzou, Y.,... & Varol, O. (2025). Quantifying global foreign affairs with a multimodal dataset of diplomatic websites. <i>Scientific Data</i> . https://doi.org/10.1038/s41597-025-06334-5		
	[p2] Naemi, A., Tashk, A., Sorayaie Azar, A., Samimi, T., Tavassoli, G., Bagherzadeh Mohasefi, A., Heshmat Najafabad, M. ,... & Niazkhani, Z. (2025). Applications of artificial intelligence for metastatic gastrointestinal cancer: A systematic literature review. <i>Cancers</i> https://doi.org/10.3390/cancers17030558		
IN PREP. / REVIEW	[u1] Heshmat Najafabad, M. , Aydin, C., Varol, O., MemoSpan: Automated Span-Level Annotation and Modeling of Autobiographical Memories		
TALKS & PRESENTATIONS	[t1] Develioğlu, E. M., Tanış, S. B., Heshmat Najafabad M. , Varol, O., Ritchey M. & , Aydın, Ç. (2026, June). The role of spatial imagery in the vividness and episodic specificity of autobiographical memories. Autobiographical Processing & Psychopathology Conference (APP 2026), University of Plymouth, Plymouth, UK		
RESEARCH EXPERIENCE	Research Assistant , Sabanci University - VRL Lab	2024 - Present	
	Supervised by Prof. Onur Varol		
	• Developing MemoSpan for automated span-level annotation and modeling of Turkish autobiographical memories.		
	• Built and evaluated NLP and NER models, including the pipeline for the diplomatic-websites dataset published in <i>Scientific Data</i> [p1].		
	• Applied graph methods to analyze structural patterns and relationships in complex datasets.		
	Research Assistant , Urmia University - Machine Learning Laboratory	2022 - 2024	
	Supervised by Prof. Jamshid Bagherzadeh		
	• Applied explainability methods to machine-learning and deep-learning models to identify the features driving their predictions.		

	Research Assistant , University of Southern Denmark & Urmia University Advised by Dr. Amin Naemi Conducted a systematic literature review of AI applications in metastatic gastrointestinal cancer, resulting in a publication in <i>Cancers</i> [p2].	2022 - 2024
SELECTED TEACHING EXPERIENCE	Graduate - CS 308: Software Engineering [Spring'25 - Now] - DS 201: Introduction to Data Science [Fall'24] Undergraduate - Fundamentals of Programming, [Fall'21, Fall'22] - Advanced Programming, [Spring'21, Fall'22] - Information Retrieval, [Fall'22] - Data Structures and Algorithms, [Spring'21]	
WORK EXPERIENCE	Data Scientist & Machine Learning Engineer DataCoLab Ltd., United Kingdom (Remote) - Developed predictive models for forecasting sensor temperatures, improving accuracy and reliability. - Designed an end-to-end anomaly detection pipeline for real-time monitoring and reporting. - Implemented audio-processing workflows for feature extraction and classification. - Cleaned and imputed tabular and time-series datasets for downstream modeling. - Fine-tuned models using KerasTuner and GridSearchCV for performance optimization.	2022 - 2023
HONOURS AND AWARDS	TUBITAK Scholarship Full tuition waiver and a monthly stipend as a researcher on a TUBITAK-funded project. 2024 - 2027 Sabancı University Scholarship Received a full tuition scholarship and TAship 2024 - 2027 Full Mark , Bachelor's thesis awarded 20/20 (highest possible grade). 2023 Qualified , For the second round of the National Computer Olympiad 2017	
NOTABLE PROJECTS	Preper , Simple preprocessor for Persian texts. 2021	
SKILLS	General Programming Languages Python, Java, C, JavaScript, SQL Machine Learning Tools Keras, TensorFlow, OpenCV, NumPy, Pandas, Scikit Data management & Databases MySQL, SQLite, Postgresql Web Development FastAPI, Flask, Vue.js, HTML, CSS	
OUTREACH	SICSS : Summer Institute in Computational Social Science, participant [Summer '26] UrumLUG , Staff [Fall '23] Radio Daneshju Podcast , Writer and Podcast Structure Designer [2019-2022]	
LANGUAGES	Persian: Native, Azerbaijani: Native, Türkçe: Highly Proficient, English: Highly Proficient , (TOEFL 101: R25, L29, S22, W25)	
REFERENCES	Prof. Onur Varol - Computer Science & Engineering, Sabancı University Prof. Çağla Aydın - Psychology, Sabancı University	onur.varol@sabanciuniv.edu cagla.aydin@sabanciuniv.edu