İlker Kesen

Email: ikesen16@ku.edu.tr   **GitHub**: ilkerkesen   **Website**: ilkerkesen.github.io
Phone: (+90) 506 342 24 22   **LinkedIn**: ilkerkesen   **Google Scholar**: URL

Research Interests   Vision-Language Problems, Knowledge-Intensive NLP, Turkish NLP

Education

Koç University   İstanbul, Turkey
PhD in Computer Science and Engineering   2016 – 2023
Thesis: Advancing Toward Temporal and Commonsense Reasoning
Advisors: Deniz Yuret, Aykut Erdem.

İstanbul Technical University   İstanbul, Turkey
BSc in Electronics and Communication Engineering   2010 – 2016

Publications

ViLMA: A Zero-Shot Benchmark for Linguistic and Temporal Grounding in Video-Language Models
Ilker Kesen, Andrea Pedrotti, Mustafa Dogan, Michele Cafagna, Emre C. Acikgoz, Letitia Parcalabescu, Iacer Calixto, Anette Frank, Albert Gatt, Aykut Erdem, Erkut Erdem.
ICLR, 2024.

Detecting Euphemisms with Literal Descriptions and Visual Imagery
Ilker Kesen, Aykut Erdem, Erkut Erdem, Iacer Calixto.
3rd Workshop on Figurative Language Processing at EMNLP, 2022.

Modulating Bottom-Up and Top-Down Visual Processing via Language-Conditional Filters
Ilker Kesen, Ozan Arkan Can, Erkut Erdem, Aykut Erdem, Deniz Yuret.
5th Multimodal Learning and Applications Workshop at CVPR, 2022.

CRAFT: A Benchmark for Causal Reasoning About Forces and inTeractions
Tayfun Ates, M. Samil Atesoglu, Cagatay Yigit, *Ilker Kesen*, Mert Kobas, Erkut Erdem, Aykut Erdem, Tilbe Goksun, Deniz Yuret.
Findings of ACL, 2022.

Fast Multidimensional Reduction and Broadcast Operations on GPU for ML
Doga Dikbayir, Enis Berk Coban, *Ilker Kesen*, Deniz Yuret, Didem Unat.
Concurrency and Computation: Practice and Experience, 2018.

Research Experience

Research Scientist at Koç University, KUIS AI Center
Supervisors: Aykut Erdem, Gozde Gul Sahin   Nov. 2023 – present
I lead a small team of research engineers, focusing on developing tools, benchmarks and models tailored for the Turkish language. I also collaborate on language-vision research projects with faculty and graduate students.

Research Assistant at Koç University, KUIS AI Center
Supervisors: Deniz Yuret, Aykut Erdem, Erkut Erdem   Sep. 2016 – Sep. 2023
My main research focus is language grounding to vision. I was also an active contributor of Knet deep learning framework implemented in Julia.

Visiting Researcher at Amsterdam UMC, University of Amsterdam

Supervisors: Iacer Calixto   Sep. 2022 – Oct. 2022

Developed a dataset for pretrained video-language models.

Visiting Researcher at Qatar Computing Research Institute

Supervisors: Deniz Yuret, Sanjay Chawla   Apr. 2019

Worked on performance metric-based optimization projects. Re-implementation of these projects in Julia. Julia tutoring at the institute.

Summer Research Intern at Koç University

Supervisors: Deniz Yuret   Jun. 2016 – Aug. 2016

Re-implemented state-of-the-art image captioning systems (Show and Tell, Show, Attend, and Tell) in Julia / Knet. Performed speed benchmarks.

Teaching Experience	**Teaching Assistant at Koç University**	Spring 2018 – Fall 2022
	COMP 541: Deep Learning (site)	
	Teaching Assistant at Koç University	Fall 2019 – Spring 2022
	COMP 542: Natural Language Processing (site)	
	Teaching Assistant at Koç University	Fall 2016 – Fall 2017
	COMP 200: Structure and Interpretation of Computer Programs (site)	

Industry Experience

Radity GMBH   Istanbul, Turkey

Software Developer   Jun. 2014 – Sep. 2014

Development of an online appointment web application using Python/Django.

ITU VLSI Labs   Istanbul, Turkey

Engineering Intern   Dec. 2012 – Oct. 2013

Maintenance of the lab's administrative web application in PHP. Ported a circuit design tool to newer versions of MATLAB, Cadence and Cadence SKILL.

Artistanbul PR   Istanbul, Turkey

Software Developer   Oct. 2010 – Sep. 2011

Development of many Django web applications.

Pardus Linux – TUBITAK   Ankara, Turkey

Contributor (Remote)   Dec. 2006 – Mar. 2008

Maintenance of many PiSi packages. Bug fixing for *-manager user interface family which are all implemented with Qt/PyQt. Active new user support.

Honors, awards and scholarships	
Best Paper Award	MULA, 2022
KUIS AI Fellowship	KUIS AI Center, 2020
Graduate Scholarship	Koç University, 2016
Ranked 781st among 1M students	OSYM, 2010
Ranked 459th among 1M students	MEB, 2006
Ranked 5th among 100k students	MEB, 2006

Skills

Programming – Proficient in: Python, Julia. Familiar with: C/C++, Racket, Javascript.

Frameworks – Pytorch, Pytorch Lightning, HuggingFace, Numpy, Knet, Django.

Languages – Turkish (native), English (advanced), French (beginner)

References

Deniz Yuret (dyuret@ku.edu.tr)
Aykut Erdem (aerdem@ku.edu.tr)
Erkut Erdem (erkut@cs.hacettepe.edu.tr)