Ekin **Akyürek**

COMPUTER SCIENCE & ARTIFICIAL INTELLIGENCE LABORATORY, MIT

32 Vassar Street, D393, Cambridge, Massachusetts, 02139

✉ akyurek@mit.edu | ⌂ ekinakyurek.com | ⊙ ekinakyurek | in ekinakyurek

Education

Massachusetts Institue of Technology	*Cambridge, MA*
PH.D. STUDENT IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE	*Sept 2019 - Present*

• Advisor: Prof. Jacob Andreas

Koç University	*İstanbul, TR*
B.S. IN ELECTRICAL AND ELECTRONICS ENGINEERING; B.S IN PHYSICS	*Sept 2013 - Feb 2019*

• Research Advisor: Prof. Deniz Yuret
• Summa Cum Laude; 2nd in University; 1st in Physics
• GPA: 4.07/4.30

Izmir Science High School	*İzmir, TR*
	Sept 2009 - Feb 2013

• Bronze Medal in International Physics Olympiad, 2013

Publications

[1]   E. Akyürek, E. Dayanık, and D. Yuret, "Morphological Analysis Using a Sequence Decoder", *Transactions of the Association for Computational Linguistics*, vol. 7, 2019.

[2]   A. Börütecene, I. Bostan, E. Akyürek, A. Sabuncuoglu, I. Temuzkusu, Ç. Genç, T. Göksun, and O. Özcan, "Through the glance mug: A familiar artefact to support opportunistic search in meetings", in *Proceedings of the Twelfth International Conference on Tangible, Embedded, and Embodied Interaction*, ACM, 2018.

Research Experience

Computer Science & Artificial Intelligence Laboratory, MIT	*Cambridge, MA*
PHD STUDENT	*Sept 2019 - Present*

• Working on (compositional) generative modeling for data augmentation in language with Prof. Jacob Andreas

Computer Science & Artificial Intelligence Laboratory, MIT	*Cambridge, MA*
VISITING RESEARCHER	*Jul. 2018 - June 2019*

• Worked on linear algebra formalization of automatic differntiation with Prof. Alan Edelman (paper is in print)
• Implemented distributed non-parametric Bayesian algorithms for efficient inference with John W. Fischer (DPMM.jl)
• Implemented SoTA Visual Q & A models on GQA dataset
• As outcome, I've written DPMM.jl and KnetLayers.jl packages, and contribute to Knet.jl package

Artificial Intelligence Laboratory, Koç University	*İstanbul, TR*
RESEARCHER	*July. 2017 - July 2018*

• Worked on morphological analysis and disambiguation task by deploying seq2seq language models.
  The paper based on the research accepted by TACL, and will be presented at EMNLP 2019.
• Worked on visual-language grounding

Arçelik Research Center for Creative Industries, Koç University	*İstanbul, TR*
ELECTRONICS DESIGNER & SOFTWARE ENGINEER	*Sept 2016 - July 2017*

• Designed and programmed a prototype of interactive mug with speech recognition and artificial intelligence capabilities. A paper based on the research was submitted to TEI Conference, 2018.

Work Experience

Tria.ai	*İstanbul, TR*
COFOUNDER; CTO	*November 2018 - Present*

• Tria.ai is a tech consulting company which develops SoTA data science solutions for companies in retail.
• Managing technical projects and conducting product development process.

Aselsan *Ankara, TR*

Digital Design Engineer Intern *June 2017 - July 2017*

- Designed an interface on the FPGA board which drives specific IC circuits which are used in wireless communication.

Balfis *Austin, TX*

Software Developer Intern *June 2016 - August 2016*

- Designed a Django web server for company's cross-platform mobile application
- Coded server-side communication part of the application, written in Ionic framework

Molocate *İstanbul, TR*

Full-Stack Developer *January 2016 - August 2016*

- Created the UI of the IOS application
- Added back-end communication functionality to the front-end application written in the Swift language.

Honors & Awards

International

2016	**Regional Finalist**, Hult Prize	*London, UK*
2013	**Bronze Medal**, International Physics Olympiad	*Copenhagen, DK*
2013	**AP Scholar Award**, College Board	*U.S*

Domestic

2018	**Best Senior Design Project**, Koç University Electrical Engineering Department	*İstanbul, TR*
2016	**Best Design Award**, TUBITAK UAV Competition	*İstanbul, TR*
2016	**2nd Place**, İstanbul Technical University Robotics Olympics	*İstanbul, TR*
13'-19'	**Full-Merit Undergraduate Scholarship**, Koç University	*İstanbul, TR*
13'-19'	**TUBITAK Undergraduate Scholarship**, TUBITAK	*Ankara, TR*
2012	**Gold Medal**, TUBITAK National Physics Olympiad	*Ankara, TR*

Skills

| **Programming** | Python, Julia, Java, MATLAB, C++, JavaScript, Swift, PHP, Ionic |
| **Electronics** | DSP, SPICE, PCB Design, VHDL Design, Microcontrollers |

Teaching Experience

2016	**Tutor**, Electromagnetism, Koc University	*İstanbul, TR*
2016	**Tutor**, Circuit Design, Koç University	*İstanbul, TR*
15'-16'	**Tutor**, Signal & Systems, Koç University	*İstanbul, TR*
14'-15'	**Teaching Assistant**, Physics, TUBITAK Science Olympiad Summer and Winter Schools	*Ankara, TR*

Volunteer Work

Make a Wish Turkey *İstanbul, TR*

Volunteer *2014-2017*

- With a group of volunteering peers, we visited cities around the country to make the utmost dreams of the children with life threatening diseases. We raised funds and arranged events for children

Koc University Education Society *İstanbul, TR*

Volunteering Teacher *2013-2014*

- Gave free lectures for secondary school kids from families with low socio-economical status to support with their classes

Leadership & Club Activities

IEEE Robotics & Automation Society, IEEE Student Branch   *İstanbul, TR*

Chairman   *July 2015 - June 2016*

- Hold 5-week Arduino & Electronics Design Courses for the freshman engineering majors in the Koç University
- Arranged 5-week Raspberry Pi Development Courses given by a Microsoft MVP which provided students with internship opportunities at Microsoft
- Organized Techno-Date which brings together students and tech startups. During the event students had the chance to listen-up numerous start-up journeys
- Completed two projects with the team and appointed to local awards (Drone.NET and KUAV)

IEEE Student Branch   *İstanbul, TR*

Board Member   *Sept 2014 - June 2018*

- Organized 12th IEEE Turkey Student & Young Professional Congress in 2015 with 400 IEEE members in Koç University
- Organized "Bi' Fikir Bi' Şirket" which is a 2-day comprehensive event for students interested in technology enterprises and startups, including seminars, workshops and entertainment. The event also comprises a competition for startups to receive support from Koc Incubation Center