

# Afra Feyza Akyurek

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## EDUCATION

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### Ph.D. in Computer Science

Sept 2019 - Present

Department of Computer Science, Boston University, Boston.

### M.Sc. in Statistics and Data Science

Sept 2018 - May 2019

Department of Statistics and Data Science, Carnegie Mellon University, Pittsburgh.

### B.Sc. in Industrial Engineering, Double Major in Computer Engineering

Sept 2013 - June 2018

Full-Merit Scholarship, Ranked 3<sup>rd</sup> in Computer Engineering  
Koc University, Istanbul.

## INTERESTS

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Natural Language Processing, Continual Few-Shot Learning for Vision and Language, Zero-shot Generalization in NLP, Social Biases in Language Models

## PUBLICATIONS

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Afra Feyza Akyürek, Sejin Paik, Muhammed Yusuf Kocyigit, Seda Akbiyik, Şerife Leman Runyun, and Derry Wijaya. On Measuring Biases in Prompt-based Learning *Under Review*. 2022

Afra Feyza Akyürek, Ekin Akyürek, Derry Wijaya and Jacob Andreas. Subspace Regularizers for Few-Shot Class Incremental Learning. *ICLR 2022*. 2021

Garry Kuwanto\*, Afra Feyza Akyürek\*, Siyang Li\*, Isidora Chara Tourni\* and Derry Wijaya. Low-Resource Machine Translation for Low-Resource Languages: Leveraging Comparable Data, Code-Switching and Compute Resources. *Preprint*. 2021

Ekin Akyürek, Afra Feyza Akyürek and Jacob Andreas. Learning to Recombine and Resample Data for Compositional Generalization. In Proceedings of ICLR 2021. 2021

Afra Feyza Akyürek, Lei Guo, Randa Elanwar, Margrit Betke, Prakash Ishwar and Derry T. Wijaya. Multi-label and Multilingual News Framing Analysis. In Proceedings of ACL 2020. 2020

## RESEARCH AND INTERNSHIP EXPERIENCE

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### Machine Learning Research Intern

June 2021 - August 2021

*Apple Inc.*

- Measuring and tackling gender bias in large scale pretrained language models.

### Research Assistant

September 2019 - Present

*Department of Computer Science, Boston University*

- Zero- and few-shot generalization in vision and language.
- Cross-lingual and low-resource-focused NLP research under the supervision of Prof. Derry Wijaya with applications to journalism.
- Developed of a low-resource machine translation tool for the Learning with Less Labels (LwLL) project by DARPA.

### Machine Learning Intern

May 2019 - July 2019

*Novartis Pharmaceutical Company, New Jersey, US*

- Focusing on statistical analysis of CAR-T therapy, a highly promising personalized immuno-therapy for cancer under the supervision of Kapildeb Sen and Joel Greenhouse. I created an explainable predictive model for treatment efficacy, revealed outstanding findings and communicated them to clinical experts.

**Teaching Assistant**

September 2018 - May 2019

*Department of Statistics and Data Science, Carnegie Mellon*

- 36-315 Graphics and Visualization
- 36-350 Statistical Computing

**Undergraduate Research Assistant**

February 2017 - December 2017

*Department of Industrial Engineering, Koc University*

- Statistical assessments of hand hygiene compliance and antibiotic use in Koc University Hospital.
- Deploying R and Elasticsearch for data management, and Shiny to build a web application for easy surveillance.

**Operations Research Intern**

June 2017 - August 2017

*PlusOneMinusOne (now Arute Solutions), Istanbul*

- Using Java, I've implemented meta-heuristic methods including genetic algorithm and simulated annealing to address the optimization problem of cash management across ATM networks.

**Business Analytics Intern**

June 2016-December 2016

*LC Waikiki, Istanbul*

- Completing two tasks: dispersion analysis of the goods in the logistics center using R and determining the optimum vehicle load factors for all routes throughout the logistics network with CPLEX Optimizer.

**HONORS AND AWARDS**

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<b>Hariri Graduate Student Fellow</b> , Hariri Institute for Computing, Boston	2021-2024
<b>Ranked 3<sup>rd</sup> in Computer Engineering</b> , completed the degree in one year, Koc University, Istanbul	2018
<b>Best Senior Design Computer Eng.</b> , Self-Driving Cars with Deep Reinforcement Learning	2018
<b>Vehbi Koc Scholar Award</b> , Outstanding Academic Achievement, Koc University	Sept 2013 - June 2018
<b>Arsel Scholar Award</b> , ranked 1 <sup>st</sup> in admittance to the program, Koc University	Sept 2013 - June 2018
<b>Turkish Premiership Scholar</b> , five year funding for undergraduate studies, Istanbul	2013 - 2018
<b>Society of Women Engineers Future Leader</b> , Chicago USA	2015
<b>31<sup>st</sup> Place in National University Entrance Exam</b> amid 2 million takers in Turkey	2013

**TALKS**

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<b>BU Artificial Intelligence Research Seminars</b> on Multilingual News Framing, Boston	Jan 2020
<b>UNESCO International Symposium</b> on Girls' Education in STEM, Bangkok	August 2017

**EXTRA-CURRICULAR AND LEADERSHIP ACTIVITIES**

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<b>Social Chair</b> Artificial Intelligence Research Group, Boston University	2021-2022
<b>Graduate Mentor</b> AI Research Workshop for Undergraduate Women in Computing, Boston University	2020
<b>Regional Finalist</b> at HULT Prize \$1 million Social Entrepreneurship Competition, London	March 2017
<b>Regional Finalist</b> at HULT Prize \$1 million Social Entrepreneurship Competition, Dubai	March 2016
<b>Attendee</b> Society of Women Engineers Annual Conference, Philadelphia, PA	November 2016
<b>Chair</b> , Society of Women Engineers, Koc University, Istanbul	June 2016 - June 2017
<b>Future Leader</b> Selected as the future leader by SWE in the international region (outside the US)	August 2015

**Attendee** Society of Women Engineers Annual Conference, Nashville, TN

November 2015

**Minor in Entrepreneurship**, Nanyang Technological University, Singapore.

July 2015

**Volunteer**, Young Guru Academy Leadership School, Istanbul

January 2015 - March 2016

**Volunteer**, Make A Wish Turkey, Istanbul

September 2013 - June 2018

## **SKILLS**

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Fluent in Python, Pytorch, R with some experience in Java, SQL, NoSQL, Docker, Julia and C/C++.