Zana Buçinca

zbucinca@seas.harvard.edu · scholar.harvard.edu/zbucinca ·

Research Interests

Human-AI Interaction; AI-Assisted Decision Making; Machine Learning; Responsible AI

Education

2019 – Present

Harvard University *Cambridge, MA*
PhD in Computer Science, *GPA: 4.00/4.00*
Thesis: Value-Aligned Human-AI Interaction
Advisor: Prof. Krzysztof Z. Gajos

2016 – 2019

Koç University *Istanbul, Turkey*
MSc in Computer Science and Engineering, *GPA: 3.96/4.00*
Thesis: Incorporating Affect Into Dialog Generation

2012 – 2016

Izmir Institute of Technology *Izmir, Turkey*
BSc in Computer Engineering, *GPA: 3.89/4.00*
Ranked 1st in the School of Engineering
Thesis: Removing Occluding Objects in Images With Motion Decomposition

Awards & Honors

2025

Siebel Scholar
Grant awarded for academic excellence and demonstrated leadership

2024

Rising Star in AI — University of Michigan
Recognized by University of Michigan's Artificial Intelligence Laboratory

2024

Rising Star in MS&E — Stanford
Recognized by Stanford's Management Science and Engineering Department

2024

NextProf Nexus – UMich, UC Berkeley, Georgia Tech
Selected to attend NextProf, a program designed to prepare diverse and promising faculty candidates for the academic job market.

2024

Top 10 Most Inspiring Women in STEM (Kosovo)
Recognized by UNDP Kosovo.

2022 - 2023

IBM PhD Fellowship Recipient

2023, 2024

Outstanding Reviewer
Special recognition for outstanding reviews at CHI 2023, CHI 2024, UIST 2024.

2020	**Best Paper Award**
	#1 paper at ACM Intelligent User Interfaces conference.
2020	**NSF Travel Award Recipient**
	Merit based travel grant awarded by NSF to attend ACM IUI Conference (canceled due to COVID-19).
2020	**CRA-W Grad Cohort Scholarship Recipient**
	(canceled due to COVID-19).
2016 - 2018	**Koç University MS Fellowship**
	Excellence fellowship awarded by Koç University to only one applicant per year.
2012 - 2016	**High Honor Student**
	Graduated with the highest GPA in the School of Engineering.
2016	**GBYF (Young Brains New Ideas) Second Place Award**
	My undergrad thesis won the 2nd place in a competition amongst 250 theses.
2012 - 2016	**Turkish Scholarship**
	Excellence scholarship awarded by the Turkish government to international students.

Manuscripts Under Review

2024 — Contrastive Explanations That Anticipate Human Misconceptions Can Improve Human Decision-Making Skills
Zana Buçinca, Siddharth Swaroop, Amanda E. Paluch, Finale Doshi-Velez, Krzysztof Z. Gajos.
26 pages, 2025 (under review – CHI).

2024 — Personalising AI Assistance Based on Overreliance Rate in AI-Assisted Decision Making
Siddharth Swaroop, **Zana Buçinca**, Finale Doshi-Velez, Krzysztof Z. Gajos.
20 pages, 2025 (under review – IUI).

2024 — Offline Reinforcement Learning for Adaptive Support in AI-Assisted Decision-Making
Zana Buçinca, Siddharth Swaroop, Amanda E. Paluch, Susan A. Murphy, Krzysztof Z. Gajos.
25 pages, 2024 (under review – TOCHI).

2024 — AHA!: Facilitating AI Impact Assessment by Generating Examples of Harms
Zana Buçinca, Chau Pham, Maurice Jakesch, Marco Ribeiro, Alexandra Olteanu, Saleema Amershi.
22 pages, 2024 (under review – TOCHI).

Journal & Conference Publications

2024 — Accuracy-Time Tradeoffs in AI-Assisted Decision Making under Time Pressure
Siddharth Swaroop, **Zana Buçinca**, Krzysztof Z. Gajos, Finale Doshi-Velez
17 pages, In Proceedings of ACM Intelligent User Interfaces, IUI'24, 2024.

2022	How Different Groups Prioritize Ethical Values for Responsible AI
	Maurice Jakesch, **Zana Buçinca**, Saleema Amershi, Alexandra Olteanu.
	20 pages, 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT), 2022.

2021	To Trust or to Think: Cognitive Forcing Functions Can Reduce Overreliance on AI in AI-Assisted Decision-Making
	Zana Buçinca, Maja B. Malaya, Krzysztof Z. Gajos.
	21 pages, In Proceedings of ACM Human-Computer Interaction (CSCW), 2021.

2020	Proxy Tasks and Subjective Measures Can Be Misleading in Evaluating Explainable AI Systems
	Zana Buçinca*, Phoebe Lin*, Krzysztof Z. Gajos, Elena L. Glassman.
	11 pages, In Proceedings of ACM Intelligent User Interfaces, IUI'20, Cagliari, Italy, 2020 Best Paper Award 🏆.

2020	AffectON: Incorporating Affect Into Dialog Generation
	Zana Buçinca, Engin Erzin, Yucel Yemez, Metin T. Sezgin
	13 pages, in IEEE Transactions on Affective Computing, 2020.

2017	Analysis of Engagement and User Experience with a Laughter Responsive Social Robot
	Berker B. Turker, **Zana Buçinca**, Engin Erzin, Yucel Yemez, Metin T. Sezgin
	5 pages, In Proceedings of Interspeech: Annual Conference of the International Speech Communication Association, 2017.

2017	Real Time Audiovisual Laughter Detection
	Berker B. Turker, **Zana Buçinca**, Metin T. Sezgin, Yucel Yemez, Engin Erzin
	5 pages, In 25th IEEE Signal Processing and Communications Applications Conference, 2017.

Peer-reviewed Workshop Publications

2023	Adaptive Interventions for Both Accuracy and Time in AI-Assisted Human Decision Making
	Siddharth Swaroop, **Zana Buçinca**, Finale Doshi-Velez.
	7 pages, 2023 Workshop on AI & HCI at ICML, 2023.

2022	Beyond End Predictions: Stop Putting Machine Learning First and Design Human-Centered AI for Decision Support
	Zana Buçinca, Alexandra Chouldechova, Jennifer Wortman Vaughan, Krzysztof Z. Gajos.
	4 pages, 2022 Human-Centered AI Workshop at NeurIPS, 2022.

Research Experience

Jul 2019 – Present	**Intelligent Interactive Systems Group, Harvard Unviersity** *Cambridge, MA*
	Research Assistant

May – Aug 2022	**FATE, Microsoft Research** *New York, NY* *Research Intern* Mentors: Dr. Jennifer Wortman Vaughan & Dr. Alexandra Chouldechova
Jun – Sep 2021	**Adaptive Interactive Systems, Microsoft Research** *Redmond, WA* *Research Intern* Mentors: Dr. Saleema Amershi, Dr. Alexandra Olteanu, Dr. Mario Tulio Ribeiro
Sep 2016 – Mar 2019	**Intelligent User Interfaces, Koç University** *Istanbul, Turkey* *Research Assistant*
Sep 2015 – May 2016	**Visual Intelligence Research Group, Izmir Institute of Technology** *Izmir, Turkey* *Undergrad Researcher*
Jun – Sep 2015	**Artificial Intelligence and Robotics Lab, Polytechnic University of Milan** *Milan, Italy* *Visiting Researcher*

Teaching Experience

Fall 2020 - present	**Teaching fellow, Harvard University** *Fall 2022 & 2023*, Computational Science and Engineering Capstone Project *Fall 2020*, System Design Project
Sep 2016 - Jan 2019	**Teaching assistant, Koç University** *Fall 2018*, Structure and Interpretation of Computer Programs *Spring 2018*, Mobile Device Programming *Fall 2017*, Programming Language Concepts *Spring 2017*, Data Structures and Algorithms *Fall 2016*, Artificial Intelligence

Talks, Guest Lectures & Panels

May 2024	Value-Aligned Human-AI Interaction *University of Washington — HCI Seminar*
May 2024	Value-Aligned Human-AI Interaction *CHI — Doctoral Consortium*
May 2024	Value-Aligned Human-AI Interaction *MIT CSAIL — Visualization Group*

Mar 2024	Value-Aligned Human-AI Interaction
	IBM — Design for AI
Feb 2024	Value-Aligned Human-AI Interaction
	Nokia Bell Labs — Responsible AI Series
Feb 2024	Offline Reinforcement Learning for Adaptive Support in AI-Assisted Decision-Making
	Northeastern University — Human-Centered AI Group
Feb 2024	Value-Aligned Human-AI Interaction
	Northeastern University — HCI Guest Lecture
Nov 2023	Value-Aligned Human-AI Interaction
	Harvard University — Recompute
Sep 2023	Adaptive Support in AI-Assisted Decision-Making
	University of Michigan — Data Science for Dynamic Intervention Decision Making Center
Jun 2023	Value-Aligned Human-AI Interaction
	Federal Aviation Administration
Jul 2022	Designing Cognition-Cognizant AI for Decision-Making Support
	Wellesley College
Mar 2022	What is Explainable AI?
	Workshop on AI organized by MITxHarvard Women in AI for high-school students
Nov 2021	Designing Cognition-Cognizant AI for Decision-Making Support
	McGill University – Department of Psychology
Oct 2021	Designing Cognition-Cognizant AI for Decision-Making Support
	Cornell University – Information Science Seminar
Oct 2021	How to succeed in AI? – Motivational Speaker
	Workshop on AI for young women organized by IPKO Foundation, Kosovo
Feb 2021	Young Scientists Interview Series
	MITxHarvard Women in AI
Jan 2021	Panelist at Career Paths Panel
	Harvard WECode 2021 High School Conference

Students Mentored

2024 -	**Diana Yue**, Undergraduate student at Harvard
2024 -	**Yiko Li**, Graduate student at Harvard

2023	**Nadine Han**, Undergraduate student at Harvard
2023	**Kim Llajaruna**, Graduate student at Harvard
2022 - 23	**Emilia Mazzolenis**, Graduate student at Harvard
2022	**Christina Xiao**, Undergraduate student at Harvard
2022	**Ryan Kim**, Undergraduate student at Harvard
2021	**Susannah Su**, Undergraduate student at Harvard
2020 - 21	**Xincheng Tan**, Undergraduate student at Harvard
2020	**Maja B. Malaya**, Visiting student at Harvard from Lodz University of Technology in Poland
2017	**Çisem Altan**, Undergraduate student at Koç University
2017	**Ilayda Zengin**, Undergraduate student at Koç University

Leadership, Outreach & Service

2023, 2024   **Workshop Organizer**
Co-organized a workshop on Regulatable Machine Learning (RegulatableML) at NeurIPS. regulatableml.github.io

2024   **Workshop Organizer**
Co-organized a workshop on Trust and Reliance in Human-AI Workflows (TREW) at CHI. chitrew.github.io

2022, 2023   **Workshop Organizer**
Co-organized a workshop on Trust and Reliance in AI-Human Teams (TRAIT) at CHI. chitrait.github.io

2021-   **Program Committee Member**
Workshop on Behavioral Machine Learning at **NeurIPS'24** (BehavioralML 2024).
FAccT'24 Conference on Fairness, Accountability, and Transparency (ACM FAccT).
Workshop on Explainable AI at **IJCAI'24** (XAI 2024).
FAccT'23 Conference on Fairness, Accountability, and Transparency (ACM FAccT).
Workshop on AI & HCI at **ICML'23** (AI & HCI 2023).
Workshop on Explainable AI at **IJCAI'23** (XAI 2023).
WWW'23 Crowdsourcing and Human Computation Track.
Workshop on Human-Centered AI (HCAI) at **NeurIPS'22**.
Workshop on Transparency and Explanations in Smart Systems (TEXSS) at **IUI'22**.

2020-   **Reviewer**
CHI (2021-2025), UIST(2022-2024), CSCW (2020-2023), IUI (2022), TOCHI(2022), TiiS (2022-2024), IEEE TAC (2021)

2022	**Organizer of the AI-assisted decision-making colloquium at Harvard**
	Organized a colloquium on AI-assisted decision-making at Harvard. The aim was to provide a forum for Harvard researchers with diverse backgrounds, ranging from machine learning to HCI, visualization, and psychology, that had either worked or were interested in the space of AI-assisted decision-making to share their findings and insights on how to design, build, and evaluate AI that complements human decision-making.
2020 -	**Mentor – WiSTEM Harvard**
	I mentor undergraduate Harvard women that want to pursue careers in STEM. The mission of WiSTEM (Women in Science, Technology, Engineering, and Mathematics) is to create and maintain an environment that fosters the growth and development of women students in the science, technology, engineering, and mathematics community at Harvard College through mentorship.
2020	**Founder of HCI Reading Group for Undergrads at Harvard**
	I organized and led a weekly reading group on Human-Computer Interaction topics at Harvard. I aimed to foster interest about the field for undergrads with varying levels of exposure to HCI.
2017-	**Founder of Kosovo Association for Women in Tech**
	I organize talks and workshops to foster young women in Kosovo pursue careers in technology.
2014-2016	**Trainer at CoderDojo**
	Taught young people (age 7-17) how to code (2 hours per week).

Technical Strengths

Programming languages
Multi-paradigm: Python, Julia; Object-oriented: Java, C++, Scala; Web development; Data analysis: R

Frameworks
Deep Learning: Pytorch and Knet; Parallel Programming: CUDA, OpenMP, MPI; Computer Vision: OpenCV; Computer Graphics: OpenGL

Languages

Albanian (native), English (fluent), Turkish (fluent), Spanish (intermediate), Italian (intermediate), German (basic)