

# Zana Bućinca

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## 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
- 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 1<sup>st</sup> 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 (acceptance rate: 23.6%).*

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

## Students Mentored

2024 -	<b>Diana Yue</b> , Undergraduate student at Harvard
2024 -	<b>Yiko Li</b> , Graduate student at Harvard
2023	<b>Nadine Han</b> , Undergraduate student at Harvard
2023	<b>Kim Llajaruna</b> , Graduate student at Harvard
2022 - 23	<b>Emilia Mazzolenis</b> , Graduate student at Harvard
2022	<b>Christina Xiao</b> , Undergraduate student at Harvard

2022	<b>Ryan Kim</b> , Undergraduate student at Harvard
2021	<b>Susannah Su</b> , Undergraduate student at Harvard
2020 - 21	<b>Xincheng Tan</b> , Undergraduate student at Harvard
2020	<b>Maja B. Malaya</b> , Visiting student at Harvard from Lodz University of Technology in Poland
2017	<b>Çisem Altan</b> , Undergraduate student at Koç University
2017	<b>Ilayda Zengin</b> , Undergraduate student at Koç University

## Outreach & Service

2023, 2024	<b>Workshop Organizer</b> Co-organized a workshop on Regulatable Machine Learning (RegulatableML) at NeurIPS. <a href="https://regulatableml.github.io">regulatableml.github.io</a>
2024	<b>Workshop Organizer</b> Co-organized a workshop on Trust and Reliance in Human-AI Workflows (TREW) at CHI. <a href="https://chitrew.github.io">chitrew.github.io</a>
2022, 2023	<b>Workshop Organizer</b> Co-organized a workshop on Trust and Reliance in AI-Human Teams (TRAIT) at CHI. <a href="https://chitrait.github.io">chitrait.github.io</a>
2021-	<b>Program Committee Member</b> Workshop on Behavioral Machine Learning at <b>NeurIPS'24</b> (BehavioralML 2024). <b>FAccT'24</b> Conference on Fairness, Accountability, and Transparency (ACM FAccT). Workshop on Explainable AI at <b>IJCAI'24</b> (XAI 2024). <b>FAccT'23</b> Conference on Fairness, Accountability, and Transparency (ACM FAccT). Workshop on AI & HCI at <b>ICML'23</b> (AI & HCI 2023). Workshop on Explainable AI at <b>IJCAI'23</b> (XAI 2023). <b>WWW'23</b> Crowdsourcing and Human Computation Track. Workshop on Human-Centered AI (HCAI) at <b>NeurIPS'22</b> . Workshop on Transparency and Explanations in Smart Systems (TEXSS) at <b>IUI'22</b> .
2020-	<b>Reviewer</b> 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)