

# BENGISU CAGILTAY

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## INTERESTS

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Interdisciplinary research in Human-Computer Interaction(HCI), Human-Robot Interaction (HRI), Child-Robot Interaction (cHRI).

I am a qualitative researcher focusing on designing social companion robots *for children, with children*.

## EDUCATION

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**University of Wisconsin-Madison, Madison, WI, USA**

Ph.D. in Computer Science

*August 2020 - Ongoing*

Advisor: Dr. Bilge Mutlu

**Middle East Technical University, Ankara, Turkey**

MS in Cognitive Science

*September 2018 - November 2020*

Advisor: Dr. Cengiz Acarturk

*Thesis: "An investigation of interactions with conversational violations: Insights from visual perception and Gricean Maxim violations"*

**Bilkent University, Ankara, Turkey**

BS in Computer Science

*September 2014 - May 2018*

## RESEARCH EXPERIENCE

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**University of Wisconsin-Madison, Madison, WI, USA**

*Graduate Research Assistant – People and Robots Laboratory*

*June 2019 - Ongoing*

Advisor: Dr. Bilge Mutlu

- *Designing Learning Companion Robots for Children*

Conducting qualitative and quantitative research in the field of human-robot interaction and designing educational robots for children.

*Laboratory Website:* peopleandrobots.wisc.edu

**University of Eastern Finland, Joensuu, FINLAND**

*Graduate Research Assistant*

*September 2019 - September 2022*

Advisor: Dr. Eija Karna

- *PEICAS - Peer Interactions involving Children with Autism Spectrum disorder in inclusive classrooms*

Collaborating on an interdisciplinary eye-tracking study to develop understanding for social participation of children with autism.

*Project Website:* peicas.fi

**Middle East Technical University, Ankara, TURKEY**

*Graduate Research Assistant*

*February 2018 - November 2020*

Advisor: Dr. Cengiz Acarturk

- *Visual Cognition Research using Eye-Tracking Technologies*

Conducted research in the domain of visual cognition and human-computer interactions using eye-tracking technologies. Proficiency in Tobii and SMI eye-tracking devices and software.

**University of Alabama, Tuscaloosa, AL, USA**

*Undergraduate Research Assistant*

*July 2017 - September 2017*

- **Embodied Learning Design and Educational Neuroscience Lab**

Advisor: Dr. Firat Soylu

Supported ongoing research in numerical cognition, number gestures, and finger counting in mathematical development, using neuroimaging techniques, i.e. EEG.

*Laboratory Website:* elden.ua.edu

- **Computer Science Department**

Advisor: Dr. Jeff Gray

Mentored in a summer programming class for high-school students.

## PROFESSIONAL EXPERIENCE

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### Meta (Facebook)

UX Researcher Intern - Qualitative

May - August 2022

Menlo Park, CA, USA

- Project: Privacy Education for Teens, Privacy Regulatory Readiness, UX Research Team

### Nielsen Data Analytics

Freelance Researcher

November 2019

Istanbul, Turkey

- Neuro-Marketing Research

Conducted data collection and analysis of a multi-modal neuro-marketing study using eye tracking (Tobii Pro Glasses 2) and functional near-infrared spectroscopy, i.e. fNIRS.

### Cybersoft Informatics Technologies Ltd.

Software Engineering Intern

August 2016

METUtech, Ankara, Turkey

## PUBLICATIONS

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- **Cagiltay, B.**, White, N., Ibtasar, R., Mutlu, B., & Michaelis, J. (2022, July) Understanding Factors that Shape Children's Long Term Engagement with an In-Home Learning Companion Robot: A Case Study. In *Proceedings of the interaction design and children conference* **Best Short Paper Award**
- **Cagiltay, B.**, Sebo, S., Michaelis, J., & Mutlu, B. (2022, July) Caretaking of a Social Robot to Facilitate Social Connection and Bonding for Long-Term Interactions. In *Proceedings of the interaction design and children conference*
- Suero Montero, C., **Cagiltay, B.**, Dindar, K., Kärnä, E., Kilpiä, A., Pihlainen, K., Kämäräinen, A. (2022, July) Analysing Inclusive Groups' Peer Interactions Using Mobile Eye Tracking in Educational Context, In *EDULEARN22 Proceedings*, pp. 6303-6312.
- Suero Montero, C., Kilpiä, A., Kamarainen, A., **Cagiltay, B.**, Kärnä, E., Cagiltay, K., Pihlainen, K., Karasu, N. (2022, July). Mobile Eye Tracking Research in Inclusive Classrooms: Children's Experiences. In 2022 International Conference on Advanced Learning Technologies (ICALT) (pp. 279-283). IEEE Computer Society. Chicago
- Lee, C., **Cagiltay, B.**, & Mutlu, B. (2022, May) The Unboxing Experience: Exploration and Design of Initial Interactions Between Children and Social Robots. In *CHI Conference on Human Factors in Computing Systems (CHI'22)*. Article 151, 1–14. ACM. **Best Paper Honorable Mention Award**
- Tang, B., Chandrasekaran, V., **Cagiltay, B.**, Sullivan, D., Fawaz, K., Mutlu, B. (HRI 2022) Confidant: A Privacy Controller for Social Robots. In *Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction (HRI'22)*. IEEE Press, 205–214.
- **Cagiltay, B.\***, White, N. T.\*, Michaelis, J. E., & Mutlu, B. (2021, June). Designing Emotionally Expressive Social Commentary to Facilitate Child-Robot Interaction. In *Interaction Design and Children* (pp. 314-325). ACM.
- Ho, H. R., **Cagiltay, B.**, White, N. T., Hubbard, E. M., & Mutlu, B. (2021, June). RoboMath: Designing a Learning Companion Robot to Support Children's Numerical Skills. In *Interaction Design and Children*. (pp. 283-293). ACM.
- Zhao, F., White, N., **Cagiltay, B.**, Niedenthal, P., Michaelis, J. E., & Mutlu, B. (2021). Designing Emotional Expressions for a Reading Companion Robot. In *Society for Affective Science Conference (SAS 2021)*.
- **Cagiltay, B.**, Ho, H. R., Michaelis, J. E., & Mutlu, B. (2020, June). Investigating family perceptions and design preferences for an in-home robot. In *Proceedings of the interaction design and children conference* (pp. 229-242). ACM.
- **Cagiltay, B.** (2020). An investigation of interactions with conversational violations: Insights from visual perception and Gricean Maxim violations (Master's thesis, Middle East Technical University).

## RESEARCH METHODS

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**Expertise in:** Lab studies, field studies, remote studies, semi-structured interviews, participatory design workshops, ethnography, surveys, usability testing, qualitative coding, thematic analysis, interaction logs analysis, eye-tracking studies, crowdsourcing (e.g., MTurk).

**Tools:** Qualtrics (Survey Design), NVivo (Qualitative Analysis), Tobii Pro Lab (Eye Tracking).

## HONORS AND AWARDS

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- **Special Recognition** for Outstanding Reviews, 2022  
*Designing Interactive Systems (DIS) 2022 Papers and Pictorials*  
*Human Factors in Computing Systems (CHI) 2023 Papers and Pictorials*
- Computer Science High Honors List, *Bilkent University* Spring 2018
- Computer Science Honors List, *Bilkent University* Fall 2014
- **First place award** in Computer Science projects 2018  
“University Students Project Competition in Priority Areas”  
*Turkish National Science Foundation (Program: 2242)*  
Project Title: “MEDIPO: Medical Image Processing Online”
- **Second place award** in Computer Science projects 2012  
“National High School Research Projects Contest”  
*Turkish National Science Foundation (Program: 2204)*  
Project Title: “Teaching Difficult History Lessons via Virtual Reality”
- **Third place award** for designing a concept solution for sustainability problem for food waste 2012  
*International Concept Project Competition (ICPC)*  
Middle East Technical University, Northern Cyprus
- **First place award** for “Best Robot Performance” 2010  
*First Lego League robotics tournament*  
Ankara, Turkey

## VOLUNTEER WORK

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- 4H Wisconsin** Fall 2020  
*Junkdrawer Robotics Mentor*
- First Lego League** 2017 - Ongoing  
*Referee and Robot Design Judge*
- World Robot Olympiad** May 2019  
*Referee*
- LEGO Robot Education Mentor** 2011
- Mentored in STEM summer camps to teach underprivileged middle school students robotics and science.
- Turkish Education Volunteers Foundation (TEGV) LEGO Robot Camp Mentor, *Ankara, Turkey*
- Turkish National Science Foundation (TUBITAK) Science Camp Mentor, *Hatay, Turkey*
- Atılım University Fun Science Camp Mentor, *Ankara, Turkey*