

# Nur Yildirim

Newell-Simon Hall 3526B  
5000 Forbes Ave  
Pittsburgh, PA 15213, USA

<https://nuryildirim.github.io/>  
[yildirim@cmu.edu](mailto:yildirim@cmu.edu)

## Research Interest

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My research focuses on supporting cross-functional AI teams in designing the user experience of AI. I build tools, methods, and boundary objects to help AI teams in (1) envisioning human-AI interactions collectively before deciding what AI system to build, and (2) facilitating collaboration and participation across disciplines and stakeholders in AI development processes. My current projects include envisioning AI opportunities for the Intensive Care Unit; developing a taxonomy of AI capabilities; and scaffolding collaboration around fairness efforts across AI team members.

## Education

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|---------------------------------|--|----------------------------|
| 08/2018 – 06/2024<br>(expected) | <b>Carnegie Mellon University</b><br>Ph.D. in Human-Computer Interaction<br>School of Computer Science<br>Advisors: John Zimmerman and James McCann<br>Concentration: Computer Science | <b>Pittsburgh, PA, USA</b> |
| 09/2011 – 09/2014               | <b>Middle East Technical University</b><br>M.Sc. in Industrial Design (Informatics track)<br>School of Architecture<br>Graduated with Honors   | <b>Ankara, Turkey</b>      |
| 09/2007 – 06/2011               | <b>Middle East Technical University</b><br>B.ID. in Industrial Design<br>School of Architecture<br>Graduated with Honors   | <b>Ankara, Turkey</b>      |

## Experience

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| 03/2020 – 02/2021 | <b>Accenture Technology Labs</b><br>Research Lead on Sponsored Research<br>Led Accenture-CMU collaborative research project investigating how design practitioners might leverage AI when designing enterprise business applications. Conducted interviews and co-design workshops with cross-functional AI teams (20+ participants). Performed qualitative analysis of transcripts. Communicated results throughout the process. Project resulted in a CHI 2022 publication.  | <b>(Remote)</b>       |
| 06/2011 – 07/2018 | <b>Designnobilis</b><br>Industrial Designer<br>Managed projects ranging from consumer electronics to assistive robots, microfluidics, transportation, lighting and toys. Carried out research, ideation, concept development, CAD modeling, prototyping and product realization via local and global manufacturers. Shipped 25+ products along with several patents and design awards. Worked in close collaboration with interdisciplinary teams of clients across scales, including tech start-ups, SMEs, institutions and corporates. | <b>Ankara, Turkey</b> |

## Peer-Reviewed Conference Publications

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- [C.2] **Nur Yildirim**, Changhoon Oh, Teresa Tung, Alex Kass, Jodi Forlizzi, John Zimmerman. How Experienced Designers of Enterprise Applications Engage AI as a Design Material. *(To appear at CHI'22)*
- [C.1] **Nur Yildirim**, James McCann, John Zimmerman. 2020. Digital Fabrication Tools at Work: Probing Professionals' Current Needs and Desired Futures. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI'20)*. Honolulu, HI, USA.

## Publications Under Review or In Progress

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- [P.2] **Nur Yildirim**, Changhoon Oh, Violet Turri, John Zimmerman, Jodi Forlizzi. AI Capability Taxonomy and Interaction Design Patterns: Resources for Design Researchers and Practitioners to Spur Design Innovation of AI. (*In Preparation*)
- [P.1] Wesley Deng, Monica Chang, **Nur Yildirim**, Micheal Madaio, Ken Holstein. Scaffolding Fair ML Practice to Improve Cross-Disciplinary Collaboration in Industry AI Teams. (*In Preparation*)

## Workshop, Symposia, and Extended Abstracts

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- [W.3] **Nur Yildirim**, John Zimmerman, Sarah Preum. 2021. Technical Feasibility, Financial Viability, and Clinician Acceptance: On the many challenges to AI in Clinical Practice. In *Proceedings of The AAAI 2021 Fall Symposium on Human Partnership with Medical Artificial Intelligence*. Virtual Event.
- [W.2] **Nur Yildirim**. 2020. Designing for Human-Centered Automation: A Co-Design Study with Fabrication Professionals. In *Joint Proceedings of CHI '20 Workshop on Automation Experience Across Domains*. Honolulu, HI, USA.
- [W.1] **Nur Yildirim**, James McCann, John Zimmerman. 2019. Redefining Collaboration for Designing Intelligent Systems that Improve Human Experience in the Workspace. In *Joint Proceedings of CHI '19 Workshop on The Future of Work*. Glasgow, UK.

## Journal Publications and Book Chapters

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- [J.2] Jodi Forlizzi, Qian Yang, Changhoon Oh, **Nur Yildirim**, John Zimmerman. Designing AI Products and Services: Benefits, Challenges, and Ideas for Improving Design Practice. To appear in *the Human-Centered Machine Learning book*.
- [J.1] **Nur Yildirim**. 2019. Marker Rendering Techniques. In *Creative Sketching in Product Design*. Ed. Shijian, L., Qiumei, L. SendPoints Publishing, Hong Kong.

## Magazine Articles

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- [M.1] John Zimmerman, Changhoon Oh, **Nur Yildirim**, Alex Kass, Teresa Tung, Jodi Forlizzi. 2021. UX Designers Pushing AI in the Enterprise: A Case for Adaptive UIs. *Interactions* 28, 1 (December 2020), 72-77.

## Awards and Honors

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- 2021 **CRA-W Graduate Cohort for Women**
- 2012 **International Design Awards**, Emerging Designer of the Year
- 2007-2011 **Undergraduate Scholarship Award** Community Volunteers Foundation

## Teaching

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- 2021 **05-674/17-200 Ethics and Policy Issues in Computing (TA)**  
Carnegie Mellon University, School of Computer Science  
Instructors: Prof. James Herbsleb and Prof. Laura Dabbish
- 2015-2018 **ID111, ID112 & ID212 Design Communication (Co-Instructor)**  
Middle East Technical University, School of Architecture  
Instructor: Prof. Hakan Gürsu

## Invited Talks

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- 2019 **Design Sketching Workshop**  
College of Design, University of Minnesota  
Host: Prof. Barry Kudrowitz
- 2017 **Success Stories: From Lab To The Market (Panelist)**  
7th Annual International Conference on Managing Intellectual Property in Universities  
Bosphorus University, Istanbul

## Recognition (selected)

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- 2019 **International Design Awards**, Infant Products, Call Vision Infant Charm, Gold
- 2018 **International Design Awards**, Robotics, Assist On-Arm, Gold
- 2016 **German Design Award**, Packaging, SASA Water, Special Mention
- 2015 **Design et al Yacht and Aviation Awards**, Snow, Finalist
- 2015 **International Design Awards**, Home Electronics, LeapVox Videophone, Silver
- 2014 **A' Design Award**, Packaging, SASA I-Cube, Bronze
- 2014 **German Design Award**, Transportation and Public Space, TAXI Station, Nominee
- 2014 **International Design Awards**, Architecture, TAXI Station, Honorable Mention
- 2013 **IDEA**, Leisure and Recreation, Creative Wooden Creatures, Finalist
- 2013 **International Design Awards**, Toys, Creative Wooden Creatures, 3rd Prize
- 2013 **Green Dot Awards**, Products, Creative Wooden Creatures, Honorable Mention

## Service

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- 2021-2022 **Reviewer**  
ACM CHI, HRI
- 2020-2021 **Mentor**  
CMU Graduate Application Assistance  
CMU AI Mentoring Program
- 2019 **Student Volunteer**  
CHI 2019, SCF 2019

## References

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### **John Zimmerman (Advisor)**

Tang Family Professor of Artificial Intelligence and Human-Computer Interaction  
Human-Computer Interaction Institute, Carnegie Mellon University  
johnz@cs.cmu.edu

### **James McCann (Co-Advisor)**

Assistant Professor  
Robotics Institute, Carnegie Mellon University  
jmccann@cs.cmu.edu

### **Jodi Forlizzi**

Geschke Director and Professor  
Human-Computer Interaction Institute, Carnegie Mellon University  
forlizzi@cs.cmu.edu

### **Alex Kass**

Principal Director & Labs Fellow  
Accenture Technology Labs  
alex.kass@accenture.com

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