DANNA GURARI

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RESEARCH INTERESTS

Computer vision, machine learning, accessibility, hybrid human-machine partnerships, medical image analysis

PROFESSIONAL	APPOINTMENTS
INCIPOSICINAL	ALL OHNEMENTS

Civic Futures Award: Designing for the 100%

PROFESSIONAL APPOINTMENTS	
Assistant Professor Computer Science, University of Colorado Boulder	August 2021 - Present
Research Fellow School of Information, University of Texas at Austin	August 2021 - Present
Assistant Professor School of Information, University of Texas at Austin Related Appointments: Faculty Affiliate for Texas Aging and Longevity Center (sin Graduate Studies Committee (GSC) for Department of Computer Science (sin	* * * * * * * * * * * * * * * * * * *
Postdoctoral Fellow Computer Science, University of Texas at Austin Advisor: Dr. Kristen Grauman	ugust 2015 - January 2017
Boulder Imaging Software Developer/Project Manager/Education Lead	2007 - 2010
Raytheon Software Engineer	2005 - 2007
EDUCATION	
Ph.D., Computer Science Boston University; Advisor: Dr. Margrit Betke	2010 - 2015
M.S., Computer Science Washington University in St. Louis; Advisor: Dr. William D. Richard	2004 - 2005
B.S., Biomedical Engineering Major and Philosophy Minor Washington University in St. Louis	2000 - 2005
HONORS AND AWARDS	
Best in Physics Award and Innovations in Medical Physics Award - Presentation [TP38]: Annual Conference for the American Association of Physic in Medicine (AAPM)	2024
Best in Physics Award - Presentation [TP32]: Annual Conference for the American Association of Physic in Medicine (AAPM)	2023
Best Paper Honorable Mention - Publication [J4]: ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)	2020
SIG-USE Innovation Award - Publication [C24]: Association for Information Science and Technology (ASIS&T	2020

- Recognition for government and education employees in Central Texas who are shaping the future

2019

	Best Paper Honorable Mention - Publication [C9]: ACM Conference on Human Factors in Computing Systems (CHI)		2017
	Best Paper Runner-Up Award - Publication [W7]: AAAI Conference on Human Computation & Crowdsourcing (HCOMP): Workshop on Human Computation for Image and Video Analysis		2016
	Researcher Excellence Award - Annual award for selected Ph.D. students in Boston University's computer science department		2015
	Best Paper Award: Innovative Idea - Publication [W3]: Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI): Interactive Medical Image Computation (IMIC) Workshop		2014
	Best Paper Award - Publication [W1]: Workshop on Applications in Computer Vision (WACV)		2013
	Ford Foundation Fellowship Honorable Mention		2011
FU	JNDING		
R	esearch		
	University of Colorado Coleman Institute for Cognitive Disabilities Vision Canceling Technologies for Individuals with Traumatic Brain Injuries PI: Danna Gurari (with Dr. Jeffrey Hebert) Amount: \$50,000 (Total: \$50,000)	2024	- 2025
	Adobe Research Amount: \$25,000		2024
	University of Colorado Cancer Center, Investigator Initiated Trials Computer Vision Enhanced Breast DIBH-RT Co-PI: Danna Gurari (with Dr. David Thomas) Amount: \$70,000 (Total: \$100,000)		2023
	Adobe Research Amount: \$20,000		2023
	Wings of Hope for Pancreatic Research / CU Anschutz Cancer Center Computer Vision Assisted Alignment for Pancreatic Stereotactic Body Radiation Therapy (SBRT) Co-PI: Danna Gurari (with Dr. David Thomas) Amount: \$50,000 (Total: \$50,000, with CU Anschutz matching Wings of Hope gift))	2023
	Adobe Research Amount: \$15,000		2022
	Microsoft AI4A Efficient Computer Vision Designed for People With Vision Impairments PI: Danna Gurari Amount: \$25,000 (Azure computing credit)	2021	- 2022
	National Science Foundation SaTC Grant 2148080 Novel Algorithms and Tools for Empowering People Who Are Blind to Safeguard Private Visual Content PI: Danna Gurari (with Co-PIs Dr. Leah Findlater and Dr. Yang Wang)	2021	- 2025

Amount: \$567,706 (Total: \$1,199,993)

Amazon Mechanical Turk 2021 Amount: \$8,640 (credit to cover Amazon Mechanical Turk fees) Microsoft AI4A 2021 Optimizing the Visual Experiences of the Visually Impaired on Social Media PI: Danna Gurari Amount: \$20,000 (Azure computing credit) University of Texas at Austin, Institute for Foundations of Machine Learning 2021 Optimizing the Visual Experiences of the Visually Impaired on Social Media Co-PI: Danna Gurari (with PI Dr. Alan Bovik) Amount: \$67,342 (Total: \$67,342) Microsoft AI4A 2020 - 2021 Seeing UI Data Set Creation PI: Danna Gurari Amount: \$50,000 University of Texas at Austin, Good Systems 2020 - 2021 ML4GIS: Developing and Evaluating Computer Vision Methods to Enhance Access to Geospatial Data in Large Historical Map Collections PI: Danna Gurari (with Co-PIs Aaron Choate and Michael Shensky) Amount: \$29,831 (Total: \$40,000) Adobe Research 2020 Amount: \$14,000 University of Texas at Austin, Good Systems 2019 - 2020 Privacy Preferences and Values for Computer Vision Applications PI: Danna Gurari (with Co-PIs Kenneth R. Fleischmann and Bo Xie) Amount: \$32,779 (Total: \$99,966) Microsoft AI4A 2019 - 2020 Technologies that Serve the Needs of People Who Are Blind Or With Low Vision PI: Danna Gurari Amount: \$150,000 Microsoft Ability Initiative (MAI) 2019 - 2020 Technologies that Serve the Needs of People Who Are Blind Or With Low Vision PI: Danna Gurari (with Co-PI Kenneth R. Fleischmann) Amount: \$236,092 (Total: \$300,000) Adobe Research 2019 Amount: \$17,000 National Science Foundation CRII Grant IIS-1755593 2018 - 2021 Predicting When, Why, and How Multiple People Will Disagree When Answering a Visual Question PI: Danna Gurari Amount: \$174,947

Silicon Valley Community Foundation Chan Zuckerberg Initiative Grant

2018 - 2020

	PI: Danna Gurari Amount: Cannot disclose publicly	
	Microsoft AI4A: AI for Accessibility Grantee Summit PI: Danna Gurari	2019
	Amount: \sim \$3,000 (fully-supported travel grant for two people)	
	Microsoft Faculty Summit PI: Danna Gurari	2019
	Amount: $\sim $1,500$ (fully-supported travel grant)	
	Amazon Mechanical Turk Amount: \$5,405 (credit to cover Amazon Mechanical Turk fees)	2019
	SAP Sponsorship Amount: \$2,764 (fully-supported travel grant)	2018
	Adobe Research Amount: \$36,000	2017 - 2018
\mathbf{S}	Service	
	Apple Gift Amount: Cannot disclose publicly (support for CVPR 2024 VizWiz Grand Challenge workshop)	2024
	Apple Gift Amount: Cannot disclose publicly (support for CVPR 2023 VizWiz Grand Challenge workshop)	2023
	SIGACCESS Gift Amount: \$5,000 (support for CVPR 2022 VizWiz Grand Challenge workshop)	2022
	Apple Gift Amount: Cannot disclose publicly (support for CVPR 2022 VizWiz Grand Challenge workshop)	2022
	Microsoft Azure Workshop Grant Amount: \$30,000 (computing credit for CVPR 2022 VizWiz Grand Challenge workshop)	2022
	Microsoft Azure Workshop Grant Amount: \$30,000 (computing credit for CVPR 2021 VizWiz Grand Challenge workshop)	2021
	Microsoft Azure Workshop Grant Amount: \$30,000 (computing credit for CVPR 2020 VizWiz Grand Challenge workshop)	2020
	Google Cloud Platform Workshop Grant Amount: \$10,000 (computing credit for CVPR 2020 Visual Question Answering & Dialog workshop	2020
	Lorentz e-Science Competition Crowdsourcing for Medical Image Analysis Workshop Amount: €15,000 (~\$17,500) + fully-supported international travel grant (~\$3,000)	2018
	Evolv Technology Gift Amount: \$1,700 (support for HCOMP 2016 GroupSight workshop)	2016

Video Analysis: Efficiently Tracking and Detecting Life Cycle Phase Transitions for Live Cells

Google Cloud Education Grants

Amount: \$17,200

Microsoft Azure Curriculum Grants

Amount: \$65,000

2018 - 2022

2022 - 2024

PUBLICATIONS

Google scholar profile hyperlink

- Authors with names underlined are individuals I advised or mentored.
- Equal authorship is denoted with an asterisk (*).
- Author ordering has lead authors (typically students) listed in order of descending contribution (e.g., first author is the lead author) while the last author is the senior author.

Peer-Reviewed Journal Publications

- [J9] Maniratnam Mandal, Deepti Ghadiyaram, **Danna Gurari**, and Alan Bovik. "Helping Visually Impaired People Take Better Quality Pictures." *IEEE Transactions on Image Processing (T-IP)*, 11 pages, 2023.
- [J8] Abigale Stangl, Kristina Shiroma, Nathan Davis, Bo Xie, Kenneth R. Fleischmann, Leah Findlater, and **Danna Gurari**. "Privacy Concerns for Visual Assistance Technologies." *ACM Transactions on Accessible Computing*, 41 pages, 2022.
- [J7] Samreen Anjum, Ambika Verma, Brandon Dang, and **Danna Gurari**. "Exploring the Use of Deep Learning with Crowdsourcing to Annotate Images." Human Computation Journal, 21 pages, 2021.
- [J6] Jakki O. Bailey, Barkha Patel, and **Danna Gurari**. "A Perspective on Building Ethical Datasets for Children's Conversational Agents" Frontiers in Artificial Intelligence, 34 pages, 2021.
- [J5] Samreen Anjum, Chi Lin, and **Danna Gurari**. "CrowdMOT: Crowdsourcing Strategies for Tracking Multiple Objects in Videos." *Proceedings of the ACM on Human Computer Interaction (PACM HCI)*, 25 pages, 2021.
- [J4] Xiaoyu Zeng, Yanan Wang, Tai-Yin Chiu, Nilavra Bhattacharya, and **Danna Gurari**. "Vision Skills Needed to Answer Visual Questions." Proceedings of the ACM on Human Computer Interaction (PACM HCI), 31 pages, 2020. Best Paper Honorable Mention Award: 22 awardees from 1,000+ submitted papers across the 3 CSCW 2020 cycles.
- [J3] Rachel N. Simons, **Danna Gurari**, and Kenneth R. Fleischmann. "'I Hope This Is Helpful': Understanding Crowdworkers' Challenges and Motivations for an Image Description Task." *Proceedings of the ACM on Human Computer Interaction (PACM HCI)*, 26 pages, 2020.
- [J2] Danna Gurari, <u>Yinan Zhao</u>, Suyog Dutt Jain, Margrit Betke, and Kristen Grauman. "Predicting How to Distribute Work Between Algorithms and Humans to Segment an Image Batch." *International Journal of Computer Vision (IJCV)*, 19 pages, March 2019. (2016 impact factor = 8.2)
- [J1] Danna Gurari, Kun He, Bo Xiong, Jianming Zhang, Mehrnoosh Sameki, Suyog Dutt Jain, Stan Sclaroff, Margrit Betke, and Kristen Grauman. "Predicting Foreground Object Ambiguity and Efficiently Crowdsourcing the Segmentation(s)." International Journal of Computer Vision (IJCV), 24 pages, January 2018. (2016 impact factor = 8.2)

Peer-Reviewed Conference Publications

- [C42] Mina Huh, Fangyuan Xu, Yi-Hao Peng, <u>Chongyan Chen</u>, Hansika Murugu, **Danna Gurari**, Eunsol Choi, and Amy Pavel. "Long-form Answers to Visual Questions Asked by Blind and Low Vision People." Conference on Language Modeling (COLM), 9 pages, October 2024. **Oral Presentation:** top ~2% (i.e., 22) from 1036 submitted papers.
- [C41] Chongyan Chen, Mengchen Liu, Noel Codella, Yunsheng Li, Lu Yuan, and **Danna Gurari**. "Fully Authentic Visual Question Answering Dataset from Online Communities." European Conference on Computer Vision (ECCV), 14 pages, October 2024. (2395/8585 = 27.9% acceptance rate)
- [C40] <u>Josh Myers-Dean</u>, <u>Jarek Reynolds</u>, Brian Price, Yifei Fan, and **Danna Gurari**. "SPIN: Hierarchical Segmentation with Subpart Granularity in Natural Images." *European Conference on Computer Vision* (*ECCV*), 14 pages, October 2024. (2395/8585 = 27.9% acceptance rate)
- [C39] Lotus Zhang, Abigale Stangl, Tanusree Sharma, Yu-Yun Tseng, Inan Xu, Danna Gurari, Yang Wang, and Leah Findlater. "Designing Accessible Obfuscation Support for Blind Individuals Visual Privacy Management." ACM Conference on Human Factors in Computing Systems (CHI), 27 pages, April 2024. (1060/4028 = 26% acceptance rate)
- [C38] <u>Josh Myers-Dean</u>, Yifei Fan, Brian Price, Wilson Chan, and **Danna Gurari**. "Interactive Segmentation for Diverse Gesture Types Without Context." *IEEE Winter Conference on Applications in Computer Vision (WACV)*, 10 pages, January 2024. (847/2042 = 41% acceptance rate)
- [C37] <u>Jarek Reynolds</u>*, <u>Chandra Kanth Nagesh</u>*, and **Danna Gurari**. "Salient Object Detection for Images Taken by People With Vision Impairments." *IEEE Winter Conference on Applications in Computer Vision* (WACV), 10 pages, January 2024. (847/2042 = 41% acceptance rate)
- [C36] Chongyan Chen, Samreen Anjum, and **Danna Gurari**. "VQA Therapy: Exploring Answer Differences by Visually Grounding Answers." *IEEE International Conference on Computer Vision (ICCV)*, 10 pages, October 2023. (2160/8260 = 26% acceptance rate)
- [C35] Zhuohao Zhang, Smirity Kaushik, JooYoung Seo, Haolin Yuan, Sauvik Das, Leah Findlater, **Danna Gurari**, Abigale Stangl, and Yang Wang. "ImageAlly: A Human-AI Hybrid Approach to Support Blind People in Detecting and Redacting Private Image Content." *The Symposium on Usable Privacy and Security* (SOUPS), 20 pages, August 2023. (33/147 = 22% acceptance rate)
- [C34] Reza Akbarian Bafghi and **Danna Gurari**. "A New Dataset Based on Images Taken by Blind People for Testing the Robustness of Image Classification Models Trained for ImageNet Categories." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 10 pages, June 2023. (2359/9155 = 26% acceptance rate)
- [C33] Abigale Stangl, Emma Sadjo, Pardis Emami-Naeini, Yang Wang, **Danna Gurari**, and Leah Findlater. "'Dump it, Destroy it, Send it to Data Heaven': Blind People's Expectations for Visual Privacy in Visual Assistance Technologies." *International Web for All Conference (W4A)*, 10 pages, May 2023. (16/32 = 50% acceptance rate)
- [C32] Tanusree Sharma, Abigale Stangl, Lotus Zhang, Yu-Yun Tseng, Inan Xu, Leah Findlater, **Danna Gurari**, and Yang Wang. "Disability-First Design and Creation of A Dataset Showing Private Visual Information Collected With People Who Are Blind." *ACM Conference on Human Factors in Computing Systems* (CHI), 19 pages, April 2023. (880/3182 =28% acceptance rate)
- [C31] <u>Tai-Yin Chiu</u> and **Danna Gurari**. "Line Search-Based Feature Transformation for Fast, Stable, and Tunable Content-Style Control in Photorealistic Style Transfer." *IEEE Winter Conference on Applications in Computer Vision (WACV)*, 10 pages, January 2023. **(641/1577=41% acceptance rate)**
- [C30] Yu-Yun Tseng*, Alexander Bell*, and **Danna Gurari**. "VizWiz-FewShot: Locating Objects in Images Taken by People With Visual Impairments." European Conference on Computer Vision (ECCV), 16 pages, October 2022. (1650/5803=28% acceptance rate)

- [C29] Chongyan Chen, Samreen Anjum, and **Danna Gurari**. "Grounding Answers for Visual Questions Asked by Visually Impaired People." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 10 pages, June 2022. **Oral Presentation: top** ~4% (i.e., 344) from 8161 submitted papers.
- [C28] <u>Tai-Yin Chiu</u> and **Danna Gurari**. "PCA-Based Knowledge Distillation Towards Lightweight and Content-Style Balanced Photorealistic Style Transfer Models." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 10 pages, June 2022. (2067/8161=25.3% acceptance rate)
- [C27] <u>Tai-Yin Chiu</u> and **Danna Gurari**. "PhotoWCT²: Compact Autoencoder for Photorealistic Style Transfer Resulting from Blockwise Training and Skip Connections of High-Frequency Residuals." *IEEE Winter Conference on Applications in Computer Vision (WACV)*, 10 pages, January 2022. **(35% acceptance rate)**
- [C26] Abigale Stangl, Nitin Verma, Kenneth R. Fleischmann, Meredith R. Morris, and **Danna Gurari**. "Going Beyond One-Size-Fits-All Image Descriptions to Satisfy the Information Wants of People Who are Blind or Have Low Vision." ACM SIGACCESS Conference on Computers and Accessibility (ASSETS), 23 pages, October 2021. (36/124=29% acceptance rate)
- [C25] Abigale Stangl, Kristina Shiroma, Bo Xie, Kenneth R. Fleischmann, and **Danna Gurari**. "Visual Content Considered Private by People Who Are Blind." *ACM SIGACCESS Conference on Computers and Accessibility (ASSETS)*, 20 pages, October 2020. (46/167=27.5% acceptance rate)
- [C24] Nathan Davis, Danna Gurari, and Bo Xie. "Quality of Images Showing Medication Packaging from Individuals with Vision Impairments: Implications for the Design of Visual Question Answering Applications." Association for Information Science and Technology (ASIS&T), 18 pages, October 2020. SIG-USE Innovation Award. (54% acceptance rate.)
- [C23] <u>Tai-Yin Chiu</u> and **Danna Gurari**. "Iterative Feature Transformation for Fast and Versatile Universal Style Transfer." European Conference on Computer Vision (ECCV), 16 pages, August 2020. (1361/5025=27.1% acceptance rate)
- [C22] Danna Gurari, <u>Yinan Zhao</u>, <u>Meng Zhang</u>, and <u>Nilavra Bhattacharya</u>. "Captioning Images Taken by People Who Are Blind." *European Conference on Computer Vision (ECCV)*, 18 pages, August 2020. (1361/5025=27.1% acceptance rate)
- [C21] <u>Tai-Yin Chiu</u>, <u>Yinan Zhao</u>, and **Danna Gurari**. "Assessing Image Quality Issues for Real-World Problems." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 11 pages, June 2020. (1470/6656=22% acceptance rate)
- [C20] Abigale Stangl, Meredith Morris, and **Danna Gurari**. "Person, Shoes, Tree. Is the Person Naked?" What People with Vision Impairments Want in Image Descriptions." ACM Conference on Human Factors in Computing Systems (CHI), 13 pages, April 2020. (769/3126=24.3% acceptance rate)
- [C19] <u>Yinan Zhao</u>, Brian Price, Scott Cohen, and **Danna Gurari**. "Unconstrained Foreground Object Search." *IEEE International Conference on Computer Vision (ICCV)*, 10 pages, October 2019. (1077/4303=25% acceptance rate)
- [C18] Nilavra Bhattacharya, Qing Li, and **Danna Gurari**. "Why Does a Visual Question Have Different Answers?" *IEEE International Conference on Computer Vision (ICCV)*, 10 pages, October 2019. (1077/4303=25% acceptance rate)
- [C17] <u>Anubrata Das</u>, <u>Samreen Anjum</u>, and **Danna Gurari**. "Dataset Bias: Predicting and Understanding the Implications for Visual Question Answering" *Association for Information Science and Technology* (ASIS&T), 10 pages, October 2019.
- [C16] **Danna Gurari**, Qing Li, Chi Lin, Yinan Zhao, Anhong Guo, Abigale Stangl, and Jeffrey Bigham. "VizWiz-Priv: A Dataset for Recognizing the Presence and Purpose of Private Visual Information in Images Taken by Blind People." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 10 pages, June 2019. (1300/5165=25.2% acceptance rate)

- [C15] <u>Yinan Zhao</u>, Brian Price, Scott Cohen, and **Danna Gurari**. "Guided Image Inpainting: Replacing an Image Region by Pulling Content from Another Image." *IEEE Winter Conference on Applications in Computer Vision (WACV)*, 11 pages, January 2019. (286/772=37% acceptance rate)
- [C14] Aimee Yun-Fang Lin, Shelley Shwu-Ching Young, Harrison Pang-Sheng Lai, and **Danna Gurari**. "A Preliminary Study on Color and Grayscale Images for Object Recognition and Scene Classification Tasks on Amazon Mechanical Turk Crowdsourcing Platform." International Conference on Human Systems Engineering and Design (IHSED), 5 pages, October 2018.
- [C13] Abigale Stangl, Esha Kothari, Suyog Dutt Jain, Tom Yeh, Kristen Grauman, and Danna Gurari. "Browse-WithMe: Design and Prototype of an Online Clothes Shopping Assistant for People with Visual Impairments." ACM SIGACCESS Conference on Computers and Accessibility (ASSETS), 12 pages, October 2018. (26% acceptance rate)
- [C12] Chun-Ju Yang, Kristen Grauman, and **Danna Gurari**. "Visual Question Answer Diversity." AAAI Conference on Human Computation & Crowdsourcing (HCOMP), 9 pages, July 2018. (29% acceptance rate)
- [C11] Danna Gurari, Qing Li, Abigale Stangl, Anhong Guo, Chi Lin, Jiebo Luo, Kristen Grauman, and Jeffrey P. Bigham. "VizWiz Grand Challenge: Answering Visual Questions from Blind People." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 10 pages, June 2018. Spotlight Presentation: top 9% from 3,309 submitted papers.
- [C10] Mehrnoosh Sameki, Tianyi Zhang, Linli Ding, Margrit Betke, and **Danna Gurari**. "Crowd-O-Meter: Predicting if a Person is Vulnerable to Believe Political Claims." AAAI Conference on Human Computation & Crowdsourcing (HCOMP), 10 pages, October 2017. (28.9% acceptance rate)
- [C9] **Danna Gurari** and Kristen Grauman. "CrowdVerge: Predicting If People Will Agree on the Answer to a Visual Question." *ACM Conference on Human Factors in Computing Systems (CHI)*, 12 pages, May 2017. **Best Paper Honorable Mention Award: top 5% from 2,400+ submitted papers.**
- [C8] Danna Gurari, Mehrnoosh Sameki, and Margrit Betke. "Investigating the Influence of Data Familiarity to Improve the Design of a Crowdsourcing Image Annotation System." AAAI Conference on Human Computation & Crowdsourcing (HCOMP), 10 pages, November 2016. (30.3% acceptance rate)
- [C7] **Danna Gurari**, Suyog Dutt Jain, Margrit Betke, and Kristen Grauman. "Pull the Plug? Predicting If Computers or Humans Should Segment Images." *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 10 pages, June 2016. (29.9% acceptance rate)
- [C6] Mehrnoosh Sameki, **Danna Gurari**, and Margrit Betke. "Predicting the Quality of Crowdsourced Image Drawings from Crowd Behavior." AAAI Conference on Human Computation & Crowdsourcing (HCOMP), 2 pages, November 2015.
- [C5] <u>Mehrnoosh Sameki</u>, **Danna Gurari**, and Margrit Betke. "Characterizing Image Segmentation Behavior of the Crowd." *Collective Intelligence*, 4 pages, June 2015.
- [C4] **Danna Gurari**, Diane Theriault, Mehrnoosh Sameki, Brett Isenberg, Tuan A. Pham, Alberto Purwada, Patricia Solski, Matthew Walker, Chentian Zhang, Joyce Y. Wong, and Margrit Betke. "How to Collect Segmentations for Biomedical Images? A Benchmark Evaluating the Performance of Experts, Crowdsourced Non-Experts, and Algorithms." *IEEE Winter Conference on Applications in Computer Vision (WACV)*, 8 pages, 2015. (36.7% acceptance rate)
- [C3] Seule Ki Kim, Danna Gurari, Chian Yang, Christopher D. Hartman, Matthew Jacobsen, Joyce Y. Wong, and Margrit Betke. "I'mCell: A Touch Pad Tool for Annotating Cell Images." Biomedical Signal Analysis (BSA): 3-D Imaging in Medicine, Florianopolis, Brazil, 3 pages, 2014.
- [C2] Zheng Wu, **Danna Gurari**, Joyce Y. Wong, and Margrit Betke. "Hierarchical Partial Matching and Segmentation of Interacting Cells." *Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI)*, 8 pages, 2012. (32% acceptance rate)

[C1] Byunghyung Kim, **Danna Gurari**, Hough O'Donnell, and Margrit Betke. "Interactive Art System for Multiple Users Based on Tracking Hand Movements." *IADIS International Conference Interfaces and Human Computer Interaction (IHCI)*, 8 pages, 2011.

Peer-Reviewed Workshop Publications

- [W11] Stuti Pandey, Josh Myers-Dean, Jarek Reynolds, and **Danna Gurari**. "Interpreting COVID Lateral Flow Tests' Results with Foundation Models." CVPR Workshop on Domain adaptation, Explainability, Fairness in AI for Medical Image Analysis (DEF-AI-MIA), 8 pages, June 2024.
- [W10] Samreen Anjum and **Danna Gurari**. "CTMC: Cell Tracking with Mitosis Detection Dataset Challenge." <u>CVPR Computer Vision for Microscopy Image Analysis (CVMI) Workshop</u>, 9 pages, June 2020.
- [W9] Abigale Stangl and **Danna Gurari**. "Towards Technologies that Mitigate Private Visual Information Disclosure by People who are Blind or Have Low Vision." *CHI Networked Privacy Workshop*, 4 pages, April 2020.
- [W8] Anuparna Banerjee, Samridhi Ojha, and **Danna Gurari**. "Let's Agree to Disagree: A Meta-Analysis of Disagreement Among Crowd Workers During Visual Question Answering." AAAI HCOMP Workshop on Human Computation for Image and Video Analysis (GroupSight), 4 pages, October 2017.
- [W7] Mehrnoosh Sameki, Mattia Gentil, **Danna Gurari**, Elham Saraee, Erik Hasenberg, Joyce Y. Wong and Margrit Betke. "CrowdTrack: Interactive Tracking of Cells in Microscopy Image Sequences with Crowdsourcing Support." AAAI HCOMP Workshop on Human Computation for Image and Video Analysis (GroupSight), 4 pages, 2016. Best Paper Runner-Up Award: selected by steering committee from anonymized papers.
- [W6] **Danna Gurari**, Mehrnoosh Sameki, Zheng Wu and Margrit Betke. "Mixing Crowd and Algorithm Efforts to Segment Objects in Biomedical Images." *MICCAI Interactive Medical Image Computation Workshop (IMIC)*, 8 pages, 2016.
- [W5] Mattia Gentil, Mehrnoosh Sameki, Danna Gurari, Elham Saraee, Erik Hasenberg, Joyce Y. Wong, and Margrit Betke. "Interactive Tracking of Cells in Microscopy Image Sequences." MICCAI Interactive Medical Image Computation Workshop (IMIC), 10 pages, 2016.
- [W4] Mehrnoosh Sameki, **Danna Gurari**, and Margrit Betke. "ICORD: Intelligent Collection of Redundant Data? A Dynamic System for Crowdsourcing Cell Segmentations Accurately and Efficiently." CVPR Computer Vision for Microscopy Image Analysis (CVMI) Workshop, 10 pages, June 2016.
- [W3] **Danna Gurari**, Diane Theriault, <u>Mehrnoosh Sameki</u>, and Margrit Betke. "How to Use Level Set Methods to Accurately Find Boundaries of Cells in Biomedical Images? Evaluation of Six Methods Paired with Automated and Crowdsourced Initial Contours." *MICCAI Interactive Medical Image Computation Workshop (IMIC)*, 9 pages, 2014. **Best Paper Award for Innovative Idea.**
- [W2] **Danna Gurari**, Diane Theriault, and Margrit Betke. "Informed Segmentation: A Framework for Using Context to Select an Algorithm and a Case Study Using Humans in the Loop." *MICCAI Interactive Medical Image Computation Workshop (IMIC)*, 9 pages, 2014.
- [W1] Danna Gurari, Seule Ki Kim, Eugene Yang, Brett Eisenberg, Tuan A. Pham, Alberto Purwada, Patricia Solski, Matthew Walker, Joyce Y. Wong, and Margrit Betke. "SAGE: An Approach and Implementation Empowering Quick and Reliable Quantitative Analysis of Segmentation Quality." *IEEE Workshop on Applications in Computer Vision (WACV)*, pp. 475-481, 2013. Best Paper Award: 2 awardees from 161 submitted papers.

Dissertation and Thesis

[T2] **Danna Gurari**. Combining Crowd Worker, Algorithm, and Expert Efforts to Find Boundaries of Objects in Images. *PhD Dissertation*, Boston University Department of Computer Science, July 2015.

[T1] **Danna Gurari**. Harmonic Imaging Using a Mechanical Sector, B-Mode Ultrasound System. *Master's Thesis*, Washington University Department of Computer Science, August 2005.

PRESENTATIONS

- Authors with names underlined are individuals I advised or mentored.
- I gave the presentation in all cases except when there is a list of authors.

Invited Technical Oral Presentations (excludes conference/workshop publication presentations)

- [TP39] Annual Conference for the American Association of Physics in Medicine, "Analysis of the Accuracy of Computer Vision Assisted Surface-Guided Radiation Therapy." Atharva Peshkar, Danna Gurari, Sarah Milgrom, Willem Schreuder, and David Thomas. Houston, Texas, July 22, 2024. Best in Physics Award: 15 awardees from ~2,200 submitted abstracts. Science Council Session's 'Innovations in Medical Physics' Award: 12 awardees from 138 submitted abstracts.
- [TP38] Annual Conference for the American Association of Physics in Medicine, "Analysis of the Accuracy of External Surrogate for Deep Inspiration Breath-Hold in the Case of Thoracic and Abdominal Breathing Patterns." Brian Shaver, <u>Atharva Peshkar</u>, Brecca Gaffney, **Danna Gurari**, and David Thomas. Houston, Texas, July 22, 2024.
- [TP37] Computer Vision with Humans in the Loop Workshop, Computer Vision and Pattern Recognition (CVPR), "Predicting When to Engage Humans to Efficiently, Collect High Quality Image and Video Annotations" Seattle, Washington, June 18, 2024.
- [TP36] Future of Accessible Work and GenAI Workshop, University of California, Irvine, "AI Descriptions of Visual Content Taken by People With Visual Impairments: The Past Decade and What's Next." Virtual, June 7, 2024.
- [TP35] Virtual Perception and Cognitive Science Seminar, University of Minnesota, "AI Descriptions of Visual Content Taken by People With Visual Impairments: The Past Decade and What's Next." Virtual, December 12, 2023.
- [TP34] Fairness in Datasets for Machine Learning in Accessibility Workshop, Google, "Responsible Data Practices Panel." Virtual, August 10, 2023.
- [TP33] Functional Vision and Accessibility (FVA) Conference, Smith-Kettlewell Eye Research Institute, "AI Descriptions of Visual Content Taken by People With Visual Impairments: The Past Decade and What's Next." Virtual, August 4, 2023.
- [TP32] Annual Conference for the American Association of Physics in Medicine, "Computer Vision Assisted Alignment for Stereotactic Body Radiation Therapy (SBRT)." Atharva Peshkar, Danna Gurari, Sergi Pujades, Michael Black, and David Thomas. Houston, Texas, July 25, 2023. Best in Physics Award: 15 awardees from ~2,200 submitted abstracts.
- [TP31] Sight Tech Global, "Did Computer Vision AI Just Get Worse or Better?" Virtual, December 8, 2022.
- [TP30] UG²+ Challenge: Bridging Gap Between Computational Photography, Computer Vision and Pattern Recognition (CVPR), "Understanding Quality Issues in Images Taken by Blind People and Their Implications for AI that Describes the Images." New Orleans, Louisiana, June 20, 2022.
- [TP29] Vision Lab, Stanford, "Describing Images with AI: Challenges and Opportunities for a Real-World Application." Virtual, June 6, 2022.
- [TP28] **Human-Centered Machine Learning Group**, Apple, "Describing Images with AI: Challenges and Opportunities for a Real-World Application." Virtual, May 23, 2022.
- [TP27] Ability Summit, Microsoft, "AI and Accessibility in the Cloud." Virtual, May 10, 2022.

- [TP26] International Conference on Information Technology (Keynote), "Describing Images with AI: Challenges and Opportunities for a Real-World Application." Virtual, April 12, 2022.
- [TP25] **Data-Enabled Science Seminar**, University of Houston Mathematics Department, "Designing Computer Vision Algorithms to Support Real Users and Recognize Multiple Perspectives." Virtual, October 22, 2021.
- [TP24] Future of Computer Vision Datasets Workshop, Computer Vision and Pattern Recognition (CVPR), "Current Limitations of Computer Vision Datasets." Virtual, June 20, 2021.
- [TP23] NLP Highlights Podcast, Allen Institute for AI, "VQA for Real Users." Virtual, May 4, 2021.
- [TP22] LANTERN The Third Workshop Beyond Vision and Language: Integrating Real World Knowledge, European Chapter of the Association for Computational Linguistics, "Vision and Language Problems for a Real-World Application of Describing Images Taken by People Who Are Blind." Virtual, April 20, 2021.
- [TP21] **IBM Research seminar**, "Vision and Language Problems for a Real-World Application of Describing Images Taken by People Who Are Blind." Virtual, March 23, 2021.
- [TP20] **Sight Tech Global**, "Computer Vision, AI and Accessibility: What's missing from this picture?" Virtual, December 3, 2020.
- [TP19] A State of the Science Virtual Conference on Rehabilitation Technology and Methods in Blindness and Low Vision, The Smith-Kettlewell Eye Research Institute, "Challenges and Opportunities for Computer Vision." Virtual, October 23, 2020.
- [TP18] Visual Question Answering and Dialog Workshop, Computer Vision and Pattern Recognition (CVPR), "Visual Question Answering: Challenges and Opportunities for a Real-World Application." Seattle, Washington, June, 2020.
- [TP17] Microsoft Research Webinar Series, "Designing Computer Vision Algorithms to Describe the Visual World to People Who Are Blind or Low Vision." Redmond, Washington, March, 2020.
- [TP16] University of Colorado Boulder, Computer Science Department, "Designing Computer Vision Algorithms to Support Real Users and Recognize Multiple Perspectives." Boulder, Colorado, March, 2020.
- [TP15] Microsoft Faculty Fellowship Summit, "Designing Computer Vision Algorithms to Support Real Users and Recognize Multiple Perspectives." Redmond, Washington, February, 2020.
- [TP14] Crowd, Cloud and the Future of Work Workshop, Microsoft Faculty Summit, "Learning to Recognize When and Why a Crowd Will Offer Different Answers to a Visual Question." Redmond, Washington, July, 2019.
- [TP13] Microsoft Faculty Summit, "Learning to Describe Images Taken by People Who Are Blind." Redmond, Washington, July, 2019.
- [TP12] Workshop on Shortcomings in Vision and Language (SiVL), European Conference on Computer Vision (ECCV), "Visual Questions: Learning to Assist Blind People and Detect When/Why a Crowd Will Disagree on the Answer." Munich, Germany, September, 2018.
- [TP11] Workshop on Large-scale Annotation of Biomedical data and Expert Label Synthesis (LA-BELS), Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI), "Mixing Crowds, Machines, and Experts for Biomedical Image Annotation." Quebec, September, 2017.
- [TP10] Computer Vision for Microscopy Image Analysis (CVMI) Workshop, Computer Vision and Pattern Recognition (CVPR), "Mixing Crowds, Machines, and Experts for Biomedical Image Annotation." Las Vegas, Nevada, July, 2016.
- [TP9] University of Texas at Austin, School of Information, "Mixing Crowds, Machines, and Experts for Scalable Image Annotation." Austin, Texas, May, 2016.

- [TP8] University of Rochester, Computer Science Department, "Mixing Crowds, Machines, and Experts for Scalable Image Annotation." Rochester, New York, October, 2015.
- [TP7] **Tufts University**, Computer Science Department, "Combining Crowd Worker, Algorithm, and Expert Efforts to Accurately and Efficiently Annotate Images." Medford, Massachusetts, April, 2015.
- [TP6] University of Texas at Austin, Computer Vision Group, "Combining Crowd Worker, Algorithm, and Expert Efforts to Accurately and Efficiently Annotate Images." Austin, Texas, April, 2015.
- [TP5] Massachusetts Institute of Technology (MIT), Media Lab, Camera Culture Group, "Combining Crowd Worker, Algorithm, and Expert Efforts to Accurately and Efficiently Annotate Images." Cambridge, Massachusetts, March, 2015.
- [TP4] Massachusetts Institute of Technology (MIT), Computer Science and Artificial Intelligence Laboratory, Computer Vision Group, "How to Utilize Crowdsourced Humans and Computers to Efficiently Collect Accurate Boundaries of Objects in Images?" Cambridge, Massachusetts, December, 2014.
- [TP3] Massachusetts Institute of Technology (MIT), Computer Science and Artificial Intelligence Laboratory, Computer Graphics Group, "How to Utilize Crowdsourcing and Algorithms to Efficiently Collect Accurate Boundaries of Objects in Images?" Cambridge, Massachusetts, October, 2014.
- [TP2] Istituto Italiano di Tecnologia (IIT), Pattern Analysis and Computer Vision Department, "Segmentation of Interacting Cells", Genova, Italy, September, 2012.
- [TP1] Boston University (BU), Image and Video Computing Group Seminar, "Segmentation of Interacting Cells," Boston, Massachusetts, April, 2012.

Outreach Presentations

- [OP4] **Boston University**, "Computer Vision and My Journey to Develop an Academic Career in this Field." Boston University ACM-W Student Chapter, August 2020.
- [OP3] **Boston University**, "Introduction to Computer Vision." Four presentations to female high school students from the Boston community, *The Artemis Project*, Boston, Massachusetts, July 2014, July 2013, June 2012, and July 2011.
- [OP2] **Boston University**, "Automated Cell Tracking." Presentation to first year BU undergraduate students, Kern Leadership Workshop, Boston, Massachusetts, September, 2011.
- [OP1] **Boston University**, "How to Find and Win a Fellowship." Presentation to undergraduate and first year graduate science and engineering female students, *Graduate Women In Science and Engineering Seminar*, Boston, Massachusetts, September, 2011.

TEACHING ACTIVITIES

Course: Neural Networks and Deep Learning

Spring 2022, Fall 2022, Spring 2024

Role: Created new curriculum and materials

Audience: Graduate students at University of Colorado Boulder

Course: Recent Advances in Computer Vision

Fall 2021, Falls of 2023 - 2024

Role: Created new curriculum and materials

Audience: Graduate students at University of Colorado Boulder

Course: Introduction to Machine Learning

Fall 2018, Springs of 2018 - 2021

Role: Created new curriculum and materials

Audience: Graduate students at University of Texas at Austin

Course: Crowdsourcing for Computer Vision

Spring 2017, Fall 2017, Fall 2019

Role: Created new curriculum and materials

Audience: Graduate students at University of Texas at Austin

Guest Lectures

Course: Disciplinary Foundations, Topic: Machine Learning
 Course: Human Computation and Crowdsourcing, Topic: Crowdsourcing for Computer Vision
 Course: Honors Machine Learning and Vision, Topic: Binary Image Analysis

2010

• Course: Image and Video Computing, Topic: Active Contours

2014

Teaching Fellowships

Course: Introduction to Internet Technologies and Web Programming
 Course: Image and Video Computing
 2011

Education Lead, Boulder Imaging

2008 - 2010

Role: Created curriculum and materials (in-class and video)

Audience: Employees and customers

Topics: High performance cameras, video standards, high performance digital video

recording systems, and image processing and analysis

ADVISING AND MENTORING

Postdoctoral Fellows, Mentor

Samreen Anjum August 2023 - May 2024 Abigale Stangl May 2019 - Dec 2020

Doctoral Students, Advisor

Zhuoheng Li	August 2024 - Present
Nicholas Cooper	August 2023 - Present
Neelima Prasad	August 2023 - Present
Jarek Reynolds	August 2023 - Present
Atharva Peshkar	August 2022 - Present
Josh Myers-Dean	August 2021 - Present
Yu-Yen (Everley) Tseng	August 2021 - Present
Chongyan Chen	May 2020 - Present
Samreen Anjum, Ph.D.	August 2018 - July 2023
Tai-Yin Chiu, Ph.D.	May 2019 - Oct 2022
Yinan Zhao, Ph.D.	August 2017 - Aug 2021

Masters Students, Thesis Advisor

Anush Kumar Venkatesh	August 2023 - May 2024
Ojasvi Bhalerao	January 2022 - May 2023
Chongyan Chen	September 2019 - May 2019
Yanan Wang	January 2019 - August 2019
Meng Zhang	January 2019 - May 2019
Xiaoyu (Edith) Zeng	January 2019 - May 2019

Undergraduate Students, Mentor

Jarek Reynolds
Zach Bogart

January 2022 - May 2023
Summer 2014

Tatiana Schmidt
Eugene Yang

January 2013 - July 2013
Summer 2012

Independent Study/Research Advisor

Mo Zhou Fall 2024 - Present Aashish Mukund Spring 2024 - Present Stuti Pandey Spring 2023 - May 2024 Neel Karsanbhai Fall 2022 - May 2023 July 2022 - May 2023 Chandra Kanth Nagesh Reza Akbarian Bafghi August 2021 - December 2022 Alexander (Alec) Bell August 2021 - November 2022 Sanjana Tripathi Spring 2020 Anubrata Das January 2019 - October 2019 Nilavra Bhattacharva January 2018 - December 2019 Chi (Benny) Lin August 2017 - May 2019 Ambika Verma May 2017 - September 2019 Brandon Uyvu Dang May 2017 - May 2018 Aimee Yun-Fang Lin January 2017 - September 2017 Anuparna Banerjee January 2017 - September 2017 Samridhi Oiha January 2017 - September 2017 Esha Kothari July 2016 - August 2017

Doctoral Students, Committee Member

Xuefei Sun January 2024 - Present Michelle Ramsahoye August 2024 - Present April 2024 - Present Mohammad Imrul Jubair Rev Koki December 2023 - Present November 2023 - Present Mohsena Ashraf Shivendra Agrawal May 2023 - Present Jaxsen Day September 2019 - Present Nathan Davis January 2019 - Present Mary Martin May 2024 - July 2024 August 2023 - April 2024 Michael McCabe Lucas Havne September 2022 - October 2023 Xu Han October 2021 - July 2023 September 2021 - Jan 2023 Tyler Scott Mitch Fulton Spring 2022 April 2014 - August 2017 Mehrnoosh Sameki, Ph.D.

Masters Students, Committee Member

 Claire Simpson
 May 2023 - May 2024

 Lu Jin
 January 2020 - May 2020

 Yifan Gong
 January 2019 - May 2019

 Brandon Uyvu Dang
 January 2018 - May 2018

Undergraduate Students, Committee Member

Eric Fithian August 2024 - Present

Visiting Researcher, Advisor

Qing Li Summer 2018

High School Student, Mentor

Christopher Hung Summer 2013

Online Mentoring

MeToMeToo, www.metometoo.com

2011 - 2013

2018 - 2019

2018 - 2019

My twin sister and I published resources we used while developing academic careers, with the larger goal of establishing a centralized resource for those pursuing similar careers. Our articles to date have over 3,000 views from an international audience.

PROFESSIONAL SERVICE

ICOT ESSIONAL SERVICE	
Conference Co-Organizer	
(CVPR) Accessibility Chair (HCOMP) Works in Progress and Demos co-chair Interdisciplinary User-Centered Health Informatics Conference: Aging, Culture, and Community (CVPR) Student Volunteer Chair	2023, 2024 2021 2019 2018
Workshop Co-Founder and/or Co-Organizer	
(CVPR) AVA: Accessibility, Vision, and Autonomy Meet (CVPR) VizWiz Grand Challenge: Describing Images and Videos Taken by Blind People 2020 (CVPR) UG ² + Challenge: Bridging Gap Between Computational Photography & Visual Recogn (CSCW) Good Systems: Ethical AI (ECCV) VizWiz Grand Challenge: Answering Visual Questions from Blind People Lorentz-eScience Workshop on Crowdsourcing for Medical Image Analysis (HCOMP) GroupSight: Workshop on Human Computation for Image and Video Analysis	2022 - 2024 , 2021 - 2024 nition 2021 2019 2018 2016, 2017
Area Chair	
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)	2024, 2025 2, 2023, 2025
Program Committee/Reviewer	
MICCAI Workshop on Large-scale Annotation of Biomedical data and Expert Label	2021 2020 2020 2019 6, 2017, 2019 2016, 2017
Synthesis (LABELS) MICCAI Interactive Medical Image Computing (IMIC) Workshop AAAI Conference on Artificial Intelligence ACM Transactions on Intelligent Systems and Technology (ACM TIST) Computer Vision and Image Understanding (CVIU) Winter Conference on Applications of Computer Vision (WACV)	2016 2016 2015 2015 2014, 2015
Departmental Service	
-	023 - Present 2021 - 2023 2020 - 2021 2019 - 2021 2019 - 2020

Assistant Professor Search Committee, University of Texas at Austin

Undergraduate Education Committee, University of Texas at Austin

	Faculty Workload Committee, University of Texas at Austin TA Task Force, University of Texas at Austin Seminar Series Organizer for Image and Video Computing Group, Boston University	2018 2018 2011 - 2015
	University Service	
	AB Nexus Grant Proposal Review Professional Development Chair for Graduate Women in Science & Engineering, Boston University	2024 2011 - 2013
	Other	
	National Science Foundation (NSF) Human-Centered Computing (HCC) Grant Proposal Review Silicon Valley Community Foundation Chan Zuckerberg Initiative (CZI) Grant Proposal Review National Science Foundation (NSF) Cyber-Human Systems (CHS) Grant Proposal Review	2021 2019 2018
ME	EDIA COVERAGE	
	WIRED - "AI Could Change How Blind People See the World"	2023
	CVPR Daily - "VizWiz Grand Challenge Workshop"	2021
	EurekAlert! - "One-size fits all image descriptions on the web don't meet the needs of blind people"	2021
	TechXplore - "Keeping the unseen safe: Improving digital privacy for blind people"	2021
	Mirage News - "Keeping unseen safe: Improving digital privacy for blind people"	2021
	CU Boulder CEAS News - "Keeping the unseen safe: Improving digital privacy for blind people"	2021
	Analytics India Magazine - "How Microsoft Is Enabling Its AI-Based Technology To Be Disability-Inclusive"	2020
	DE 24 News with article reposted to AlKhaleej Today and The Next Web - "Microsoft unveils efforts to make AI more accessible to people with disabilities"	2020
	TechCrunch with article reposted to Yahoo! Finance, Daily News, Dizzed, HEDGE Accordingly, iTechNews, ProWell Tech, Small Tech News, and Tweaks "Microsoft and partners aim to shrink the 'data desert' limiting accessible AI"	2020
	TechRepublic - "Microsoft wants AI to be more helpful for people who are blind or use wheelchairs"	2020
	Microsoft AI Blog - "Shrinking the 'Data Desert': Inside Efforts to Make AI systems More Inclusive of People With Disabilities"	2020
	IBM Research Blog for publication [C22] - "Image Captioning as an Assistive Technology"	2020
	Alastair Somerville on Medium.com for publication [C20] - "Adding Context to Alt Text: User Centred Image Description"	2020
	Microsoft Research Blog for publication [C20] - "Alt Text That Informs: Meeting the Needs of People Who Are Blind or Low Vision"	2020

The Daily Texan - "UT, Microsoft Researchers Seek to Make Computers More Accessible to People Who Are Blind"	2019
MIT Technology Review for publication [C11] - "A New Data Trove Could Teach Computers to Tell Blind People What They Need to Know"	2018
Korea IT Times for publication [C11] - "SK Telecom Wins Prize at 'VizWiz Grand Challenge 2018"	2018
D!gitalist Magazine for publication [C11]"Computer Vision: An Artificial Eye To Blind People"	2018
Center for Data Innovation Blog for publication [C11] - "Training Virtual Assistants for People Who Are Blind"	2018
Denis Dushi et al. on Medium.com for publication [C11] - "VizWiz: Computer Vision Researchers Join Forces for Social Good"	2018