Shiran Dudy

PERSONAL INFORMATION

Address **Cambridge, Massachusetts**
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RESEARCH INTERESTS

Broadly focusing on augmenting humans

- NLP: cultural alignment/representation, LLM results diversification.
- HCI: user/community-centered design, participatory design.
- Focus values: fairness, user agency, participation

EDUCATION

2023-present **Research Scientist in Responsible AI**
Work on technical and socio-technical research.
"Northeastern University", Boston, MA, USA
My main interest is to promote ethical and responsible AI (RAI).
(1) My research revolves around cultural representation in AI, algorithmic fairness, inclusive design, and stakeholder engagements.
(2) I am a technical lead in the RAI consulting team of EAI.

2021-2023 **Research Associate in Human-Computer interaction**
Focus on speech, dialogue systems, responsible AI design.
"University of Colorado, Boulder" (CU Boulder), Boulder, CO, USA
Participate in the institute for student AI teaming (iSAT) project.
I research and develop a conversational partner to promote equitable and respectful human-human collaborations. Leading the interruption detection project, and equity oriented intent schema project. The goal is to promote improved learning environments for students.

2013-2020 **Ph.D. in Computer Science**
Focus on NLP, accessibility, and fairness.
"Oregon Health and Science University" (OHSU), Portland, OR, USA
Participate in Brain-Computer Interface (BCI) accessibility project at CAMBI. I developed language models, and investigated their biases (FST, transformers) with icons, letters, or word symbol sets. The project's goal is to facilitate locked-in individuals of various literacy levels to communicate with their environment.

2012-2008 **B.Sc. in Biomedical Engineering**
Focused on speech signal processing, accessibility
"Ben Gurion University" (BGU), Israel
Final project made in signal processing field where I conducted a feasibility test for a Text To Speech system (TTS) for the Hebrew language for visually impaired Hebrew speakers.

SELECTED PUBLICATIONS

"Unequal Opportunities: Examining the Bias in Geographical Recommendations by Large Language Models", Shiran Dudy, Thulasi Tholeti, Resmi Ramachandranpillai, and Muhammad Ali, Toby Jia-Jun Li, and Ricardo Baeza-Yates. Intelligent User Interactions (IUI), 2025. Won Honorable Mention Award

"Analyzing Cultural Representations of Emotions in LLMs through Mixed Emotion Survey", Shiran Dudy, Ibrahim Said Ahmad, Ryoko Kitajima, and Agata Lapedriza, Affective Computing and Intelligent Interactions (ACII), 2024. Won Best Paper Award

"Are Generative Language Models Multicultural? A Study on Hausa Culture and Emotions using ChatGPT", Ibrahim Said Ahmad, Shiran Dudy, Resmi Ramachandranpillai and Kenneth Church, Cross-Cultural Considerations in NLP workshop (C3NLP), 2024.

"Expansive Participatory AI: Supporting Dreaming within Inequitable Institutions", Shiran Dudy* and Michael A. Chang* (equal contribution), Human-Centered AI workshop (HCAI), Neural Information Processing Systems (NEURIPS), 2022.

"Refocusing on Relevance: Personalization in NLG", Shiran Dudy, Steven Bedrick, and B. Webber, Empirical Methods in Natural Language Processing (EMNLP), Punta Cana, 2021.

"Are Some Words Worth More Than Others", Shiran Dudy, Steven Bedrick, Empirical Methods in Natural Language Processing (EMNLP), Eval4NLP workshop, online, 2020. Won 2nd Best Paper Award

"BciPy: Brain-Computer Interface Software in Python", T. Memmott, A. Koçanaoğulları, M. Lawhead, D. Klee, S. Dudy, M. Fried-Oken, B. Oken, arxiv, 2020

ACADEMIC QUALIFICATIONS

2023- **Research Mentor (and PI)**
Mentoring co-ops, interns, and postdocs at the institute on research projects. (NEU)

2017 **Teaching Assistant**
"Introduction to Deep Learning", Professor Meysam Asgari
Included homework preparation and grading, and demos. (OHSU)

2016 **Teaching Assistant**
"Analyzing Sequences", Professor Stephen Wu
Included homework preparation and grading. (OHSU)

2013 **Signal Processing Researcher**
Afeka Center for Language Processing (ACLP), Professor Ami Moyal
Participate in 2 researches on key-word spotting.

2012-2013 **Research Assistant**
Speech and Signal Processing Lab, Professor Sharon Gannot.
The lab focuses on the study of speech and acoustics. Participated in a research to develop a de-reverberated signal to enhance speech recognition performance.
"Bar Ilan University" (BIU)

2011-2012 **Teaching Assistant**
"Introduction to Stochastic Processes", Professor Maoz Shamir.
Included lesson plan, frontal instruction and grading. (BGU)

2009-2010 **Research Assistant**
Computational Motor Lab, Professor Amir Karniel
The lab focuses on the study of human motor control and biomechanics. Participated in the "handshake experiment," based on Turing test theory. (BGU)

WORK EXPERIENCE

2016 **Cylance Inc.** (Summer internship)
Worked as a deep learning engineer in data science team.
Implemented deep learning architectures to detect malware.

2015 **Sensory Inc.** (Summer internship)
Worked as a speech processing engineer. Integrated trigger-based speaker verfication process, incorporated new elements to the

process and estimated optimal model parameters. Worked on a user defined process to employ a digit sequence task.

2012 **Vocal-Zoom** (Start-Up company)
Worked as a signal processing engineer. Their mission is to enable communication and speech recognition, especially in noisy environments.

2011-2012 **Vectorious Medtech** (Start-Up company)
Worked as a research and development engineer. Their mission is to develop a monitoring device for Congestive Heart Failure patients.

PC SKILLS

Languages:	Python, R, Ruby, Matlab, TCL, Cython, C++, Bash/Shell, Cygwin
Task Mngmnt:	SLURM, Hadoop, MPI, Condor, Spark
OS:	Linux, OSX, Windows, Docker (VM)
Python Tools:	PyTorch, TesorFlow, HuggingFace, virtualenv, spcay, nltk, langchain
Paper related:	Latex, Bibtex, vim
Version Control:	Git (repos on github, docker hub)
Cloud Service:	Amazon EC2, Amazon Route 53 (DNS service)

HCI skills

Experiment design. Human subject experiment (including leading an IRB project)
Applying mixed methods:
1) Qualitative: semi structured interviews, surveys
2) Quantitative: data analysis

Workshops

Organized third NLPerspectives workshop, hosted by LREC-COLING, 2024
Organized the second NLPerspectives workshop, hosted by CEUR-WS, 2023
Organized "Interdisciplinary Approaches to Getting AI Experts and Education Stakeholders Talking", Hosted at AIED, 2022

TALKS

Who's missing in AI?, Colorado's Office of Information Technology, 2024
Value based research, Cigna inc., 2023
UserNLP workshop (The World Wide Web Conference), Personalization in NLG, 2022
NLP class at CU Boulder, guest speaker to discuss "Responsible Dialogue Systems", 2021
The Hebrew University, invited talk, "Overcoming Limitations of Categorical Neural Language Models", 2021
Allen Institute for AI, invited talk, "Overcoming Limitations of Categorical Neural Language Models", 2020
Chang lab, UCSF-Berkeley, invited talk, "a proposal for language model approaches in Ecog based AAC", 2020
Bar Ilan University, invited talk, "Language Models in supportive AAC", 2019
Women Who Code, Women in Data Science Series, "Language Models in BCI systems", Portland, 2019
BCI Meeting, Natural Language Processing Workshop, "Towards Icon Language Models", Asilomar, 2018

AWARDS

Co-PI and leading "Seeing the world through LLM-colored glasses" project, $60k
Community outreach grant, planed a robotics camp for middle school students, 2022
WiML@ICML award recipient to attend WiML and ICML, 2020
WiNLP Diversity and Inclusion award recipient to attend WiNLP and ACL, 2020
WiML@ICLR award recipient to attend ICLR, 2020
Student Research Workshop (SRW) travel award to attend ACL, 2018
Graduate Student Organization (GSO) at OHSU travel award to attend NAACL, 2018
GREPSEC cybersecurity workshop scholarship, 2017

38th Security and Privacy Symposium student travel award, 2017

LANGUAGES

English (high fluency level)
Hebrew (native speaker)
Arabic (basic level)

PERSONAL SKILLS

Good human interaction skills
Good in planning and meeting objectives
Know how to work under pressure
Well organized and responsible