Katy Ilonka Gero

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Education

Ph.D. in Computer Science   Sep 2017 – current
Columbia University
Advisor: Lydia Chilton

M.S. in Computer Science   Sep 2017 – May 2019
Columbia University

B.S. in Mechanical Engineering   Sep 2009 – May 2013
Massachusetts Institute of Technology

Research Statement

I am interested in computational tools that support complex and creative tasks, with a focus on writing forms like poetry, journalism, and science writing. I design tools that use AI methods in novel and sometimes unexpected ways. I want to understand how we can use these methods to augment our abilities, rather than replace them, and consider the ethical implications of this goal, such as how to develop AI systems capable of responding to a range of inputs safely, and our feelings of ownership and agency when using them.

Research areas: *Human-Computer Interaction, Human-AI Interaction, Natural Language Processing*

Publications

Full Conference Publications

K. Gero, V. Liu, S. Huang, J. Lee, T. Requarth, L. Chilton. "What Makes Tweetorials Tick: How Experts Communicate Complex Topics on Twitter" in *Proceedings of the 21st ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '21).*
[In Submission]

K. Gero, Z. Ashktorab, C. Dugan, Q. Pan, J. Johnson, W. Geyer, M. Ruiz, S. Miller, D. Millen, W. Geyer. "Mental Models of AI Agents in a Cooperative Game Setting" in *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20).*
[CHI Best Paper]

K. Gero, C. Kedzie, J. Reeve, L. Chilton. "Low-Level Linguistic Controls for Style Transfer and Content Preservation" in *Proceedings of the 12th International Conference on Natural Language Generation (INLG '19).*

K. Gero, L. Chilton. "Metaphoria: An Algorithmic Companion for Metaphor Creation" in *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19).*

Workshop Papers and Posters

A. Calderwood, V. Qiu, **K. Gero**, and L. Chilton. "How Novelists Use Generative Language Models: An Exploratory User Study" in *1st Workshop on Human-AI Co-Creation with Generative Models (IUI '20).*

K. Gero, L. Chilton. "How a Stylistic, Machine-Generated Thesaurus Impacts a Writer's Process" in *Proceedings of the 2019 on Creativity & Cognition (C&C '19).*

K. Gero, L. Chilton. "Challenges in Finding Metaphorical Connections" in *Proceedings of the Workshop on Figurative Language Processing (NAACL '18).*

Employment

IBM Research, Research Intern   Jun 2019 - Aug 2019
Cambridge, MA
Mentor: Zahra Ashktorab

Soofa, Research & Development Lead   Mar 2016 – Aug 2017
Cambridge, MA
Soofa creates technology for cities, like solar-powered transit signs.
Managed research projects on the Soofa Platform.

Rest Devices, Product Developer   Aug 2013 – Mar 2016
Boston, MA
Rest Devices designed and manufactured a soft, wearable baby monitor.
Oversaw manufacturing; designed and implemented new algorithms.

Awards & Recognition

Magic Grant, $65k   2019 - 2020
The Brown Institute for Media Innovation

Graduate Research Fellowship Program Fellow   2017 - 2022
National Science Foundation

Seed Grant for Interdisciplinary Research, $1.8k   2018
Center for Science & Society
Columbia University

Graduate Student Digital Project Honorable Mention, $500   2018
NYC Digital Humanities

Provost's Diversity Fellowship, $6k   2017 - 2018
Columbia University

Carl G. Sontheimer Prize for Excellence in Innovation and Creativity   2013
Department of Mechanical Engineering
Massachusetts Institute for Technology

Invited Talks

Technology for Writing   2020
AI4ALL, Guest Speaker
Virtual

Technology for Writing   2020
Ignition Hacks, Guest Speaker
Virtual

Technology for Writing   2020
Columbia University, Demystifying the Dissertation Speaker
Virtual

Re-Generating Text with Style   2020
CultureHub Re-Fest, Speaker & Panelist
New York, New York

Semantic Tools for Writers   2019
Computational Models and Mimesis Symposium, Speaker & Participant
Dartmouth College, Hanover, New Hampshire

AI Tools for Creative Writing   2019
Grammarly, NLP Meeting Speaker
New York, New York

Words, words, words, style, words, words, words, and words   2019
Babycastles, WordHack Featured Artist
New York, New York

Community Service

Mentor for **BEARS Research Program for Women**   2021
Barnard College
Run monthly meetings with five undergrads to demystify research.

Organizer of **Pre-Application Review Program** for PhD Applicants   2020 – 2021
Department of Computer Science, Columbia University
Coordinated with Dean's office and led outreach efforts.

Organizer for **Bits4Justice**   2020 - *current*
Department of Computer Science, Columbia University
Run bi-monthly meetings organizing student racial justice activism.

| Academic Chair for **Women in Computer Science** (WiCS) Club | 2019 - 2020 |

Academic Chair for **Women in Computer Science** (WiCS) Club   2019 - 2020
Columbia University
Ran events to introduce undergraduates to research.

Professional Service

Co-Organizer   2020, 2021
Workshop on Human-AI Co-Creation with Generative Models
Intelligent User Interfaces (IUI)

Reviewer for CHI, UIST, CSCW, DIS, C&C   Since 2020

Involvement in the Arts

Resident Contributing Writer, CultureHub   2020 - 2021
An Introduction to Feedback
Computing Outside the Feedback Loop

Poetry Fellow, Brooklyn Poets   2020
Poet-of-the-Week Reading and Interview

Select Poetry
WHALEFALL in *taper*   2020
Self-Portrait as a Decision Tree in *Bookstore Poets Vol. 1*   2019
The Cloud in *The Blueshift Journal*   2015

Select Essays
What Kind of Sonnets Will Computers Write? in *Catapult*   2020
Language and the Algorithm in *Ploughshares* blog   2018
Is It Possible for Machines to Translate Poetry? in *Electric Literature*   2018
Why Siri Sounds Like a Girl in *SheCanCode*   2017