

How might HCI engage with easy access to unintuitive statistical likelihoods of things?

Jeffrey P. Bigham

<http://www.cs.cmu.edu/~jbigham/>



Human-
Computer
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“Everything that needs to be said has already been said. But since no one was listening, everything must be said again.”

— André Gide



Pinned



hci.social/@jbigham @jeffbigham · Oct 1, 2016

despite all my rage, I am still just a statistically probable sequence of observable online behaviors



hci.social/@jbigham
@jeffbigham

...

with @zoom_us 's new video background feature, i can stay engaged and nodding thoughtfully, even when i'm not even in the room -- this is the kind of innovation we need!

10:20 AM · Mar 22, 2020

Humans are not stochastic parrots¹ *but even as we are creative, we are probable*



Image by DALL-E 2 (and lots of unknown others)

¹Bender et al. *On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?*  FAccT 2021.

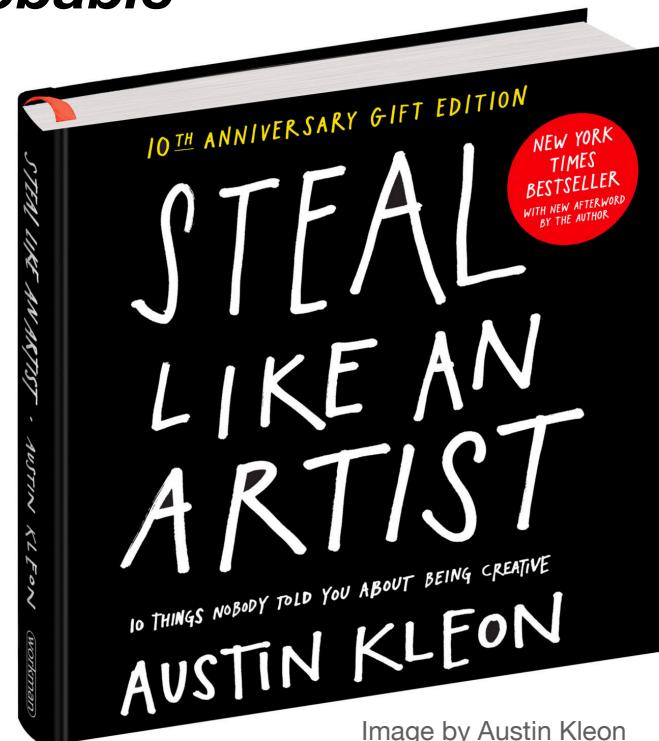


Image by Austin Kleon

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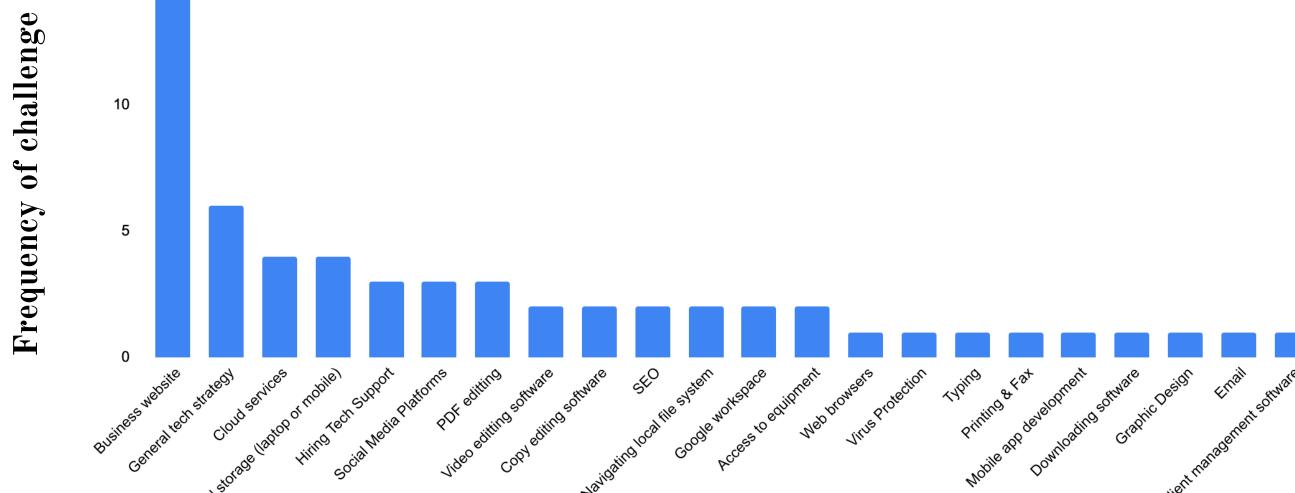


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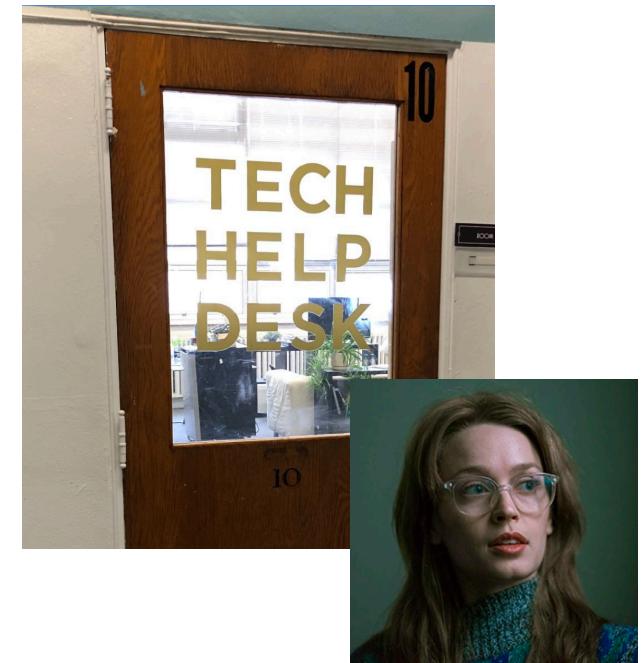


Enabling Everyone to Benefit

Enabling Everyone to Benefit



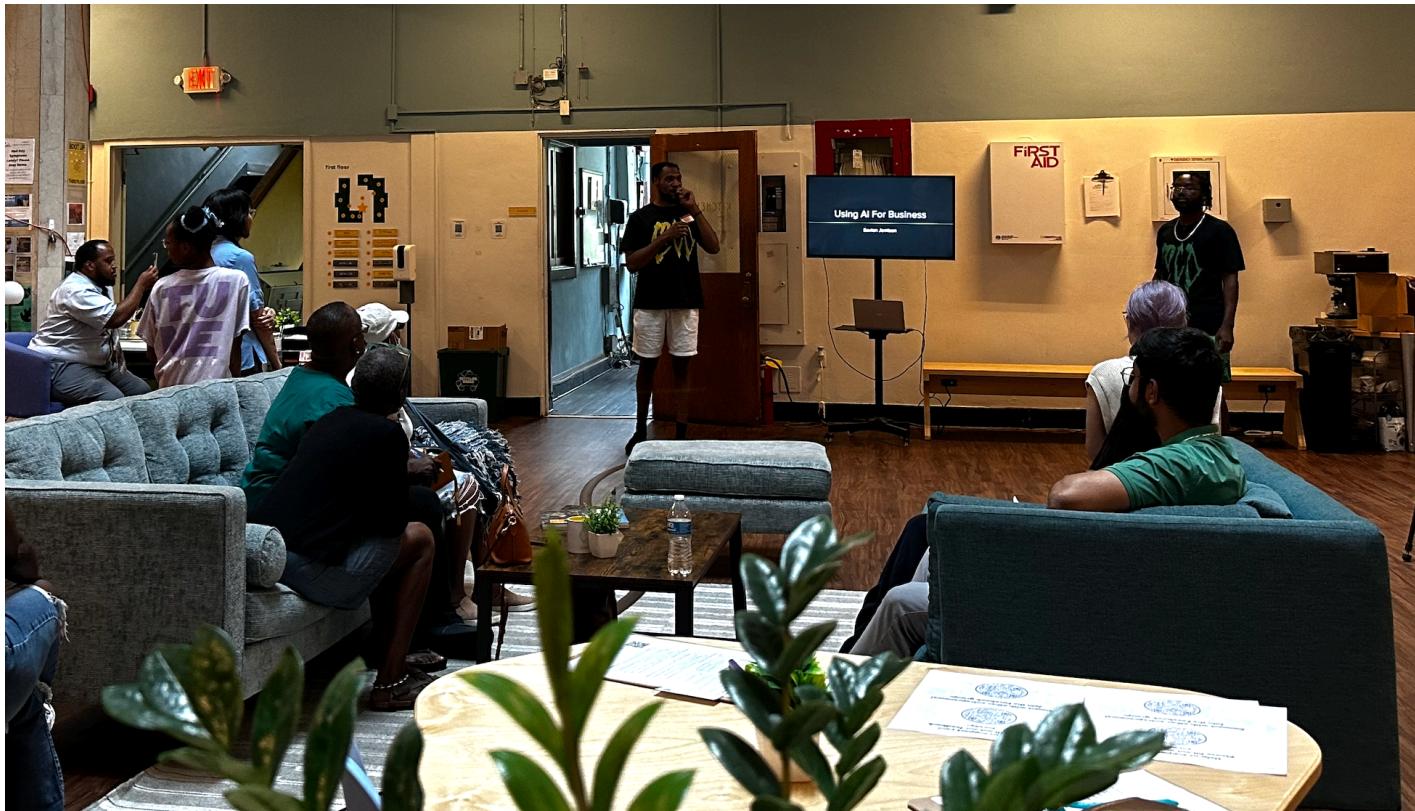
Computing challenges addressed with Tech Help Desk



Yasmine Kotturi
Carnegie Mellon University

Yasmine Kotturi, Herman T. Johnson Jr., Michael Skirpan, Sarah E. Fox, Jeffrey P. Bigham, Amy Pavel.
Tech Help Desk: Support for Local Entrepreneurs Addressing the Long Tail of Computing Challenges. CHI 2022.

Enabling Everyone to Benefit



Yasmine Kotturi
Carnegie Mellon University

Understanding Human Likelihoods

teasing apart the probable from agency

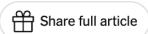
Understanding Human Likelihoods

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Can I Use ChatGPT for the Tedium Parts of My Job?

The magazine's Ethicist columnist on using artificial intelligence to assist with mundane tasks at work.

- But what are the tedious parts?

 Share full article    183

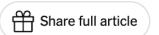


Understanding Human Likelihoods

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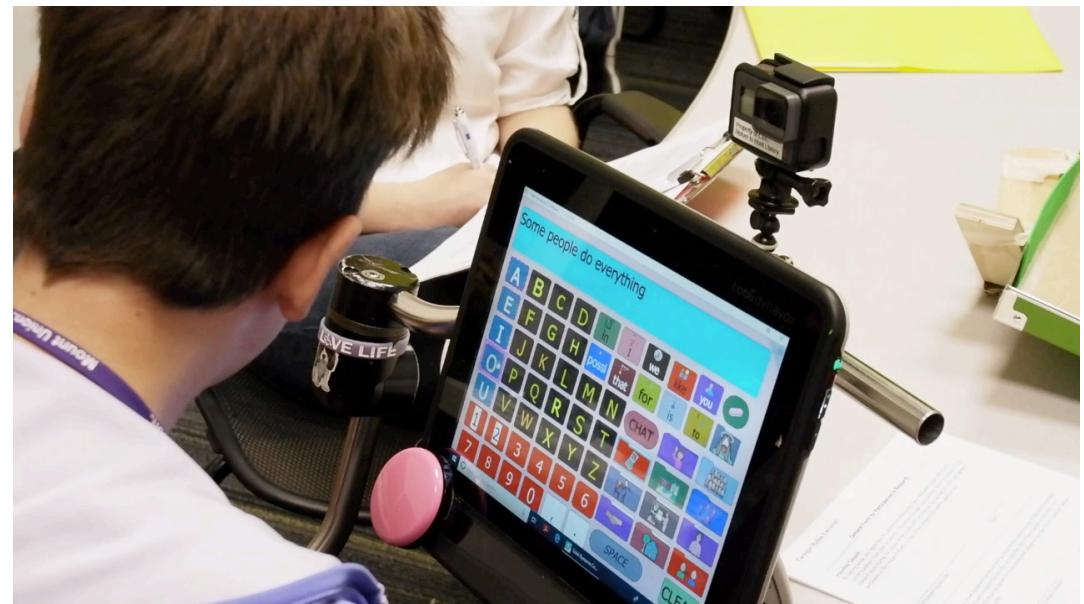
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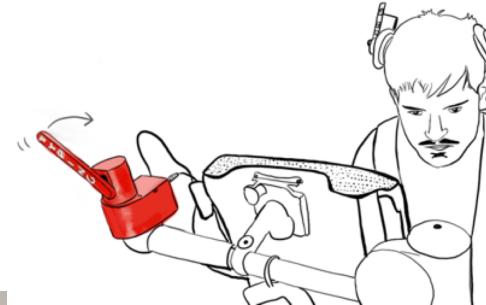
- But what are the tedious parts?



Stephanie Valencia-Valencia
University of Maryland

Understanding Human Likelihoods

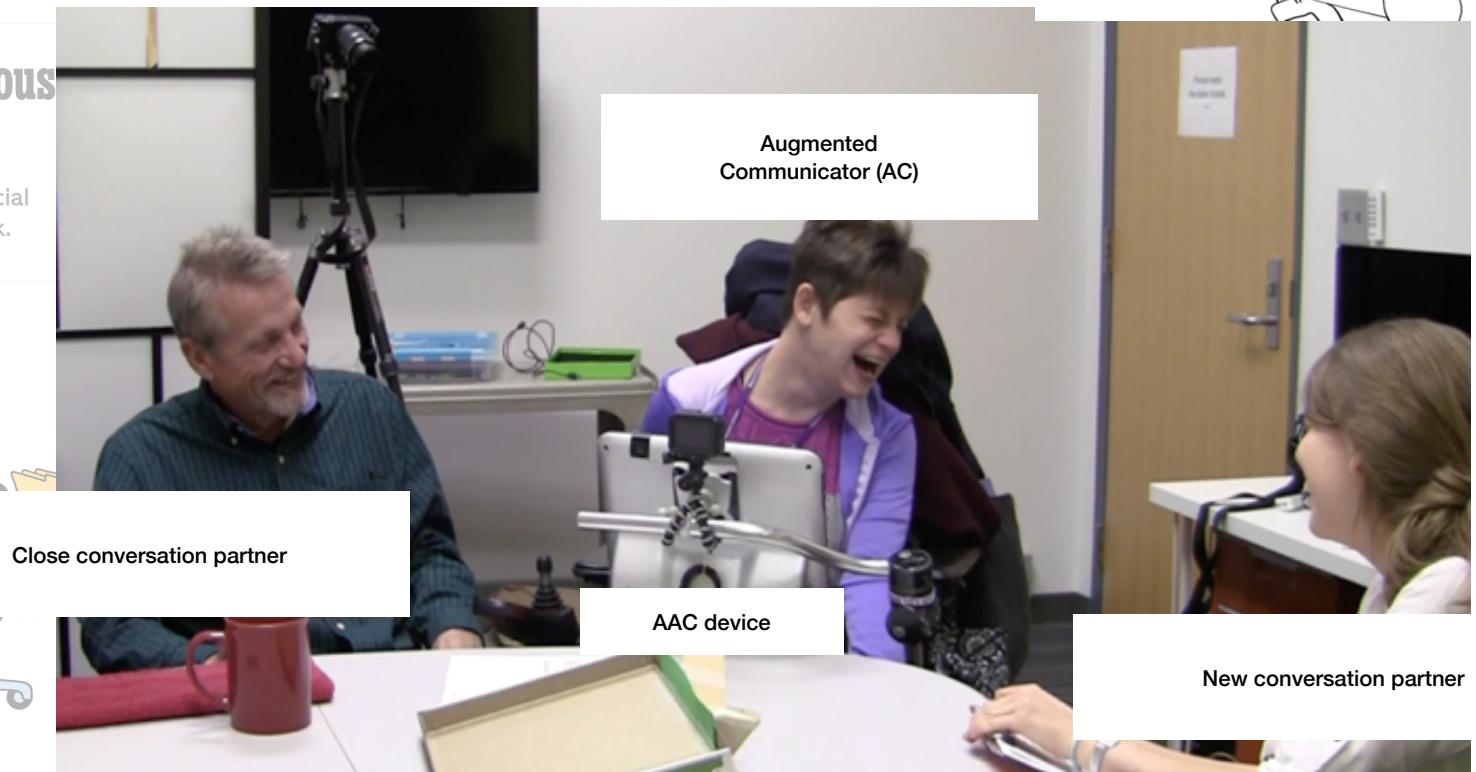
teasing apart the probable from agency



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Conversational Agency in Augmentative and Alternative Communication. Stephanie Valencia, Amy Pavel, Jared Santa Maria, Seunga (Gloria) Yu, Jeffrey P. Bigham, Henny Admoni. CHI 2020.

Designing Generative AI Outputs

Tools and methods for designing generative AI outputs

If we could write down every rule for a model's behavior, we would wouldn't need machine learning

Designing Generative AI Outputs

Tools and methods for designing generative AI outputs

Huge Corporuses

SFT Instruction Tuning

RLHF Constitutional AI

Red Teaming...

Prakhar Gupta
Google Bard



Context	My friends and I have started eating vegan food since yesterday.
Exemplar Frames Responses	Eggs are very beneficial for your body . FOOD USEFULNESS BODY-PARTS Vegan food can be good for your health. Vegetables can do wonders for your body Vegan food is very healthy.

Controlling Dialogue Generation with Semantic Exemplars. Prakhar Gupta, Jeffrey P. Bigham, Yulia Tsvetkov, Amy Pavel. NAACL 2021.

“It’s Complicated”: Negotiating Accessibility and (Mis)Representation in Image Descriptions of Race, Gender, and Disability
Cynthia L. Bennett, Cole Gleason, Morgan Klaus Scheuerman, Jeffrey P. Bigham, Anhong Guo, Alexandra To. CHI 2021.



“a cup of brown liquid” ->
“a cup of tea and a cup of coffee”



“Three people smiling on a track”

Cynthia Bennett
Google TASC

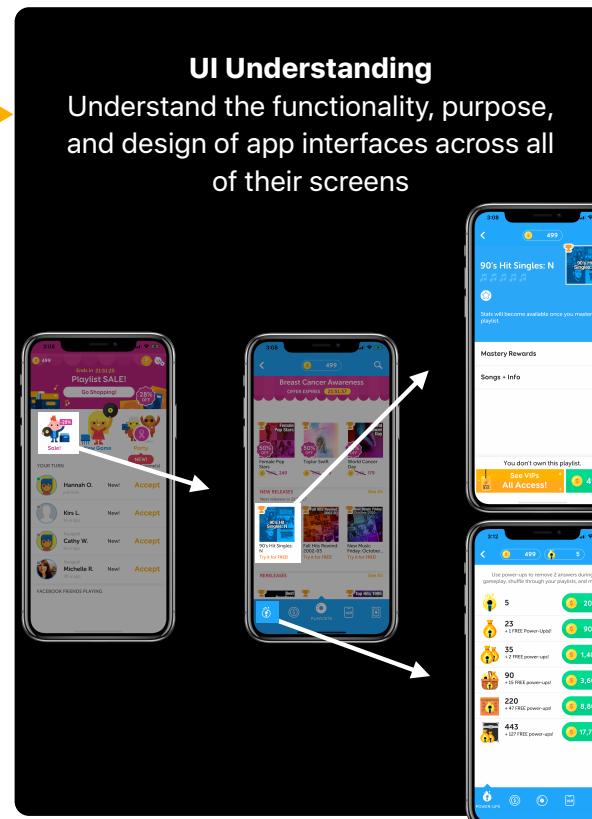
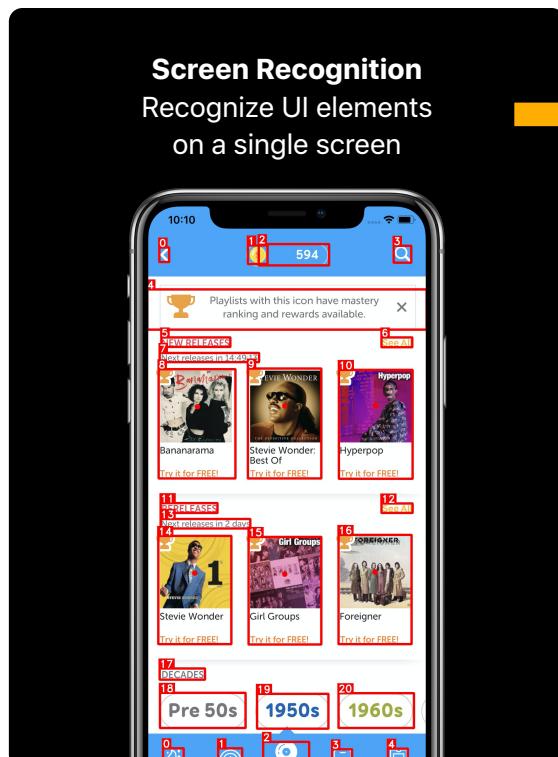


Defining the Future of Interaction

The way we interact with computers will be both more familiar and less familiar than we think in 2033

Defining the Future of Interaction

integrating with and improving existing interaction patterns



Never-ending Learning of User Interfaces.
Jason Wu, Rebecca Krosnick, Eldon Schoop, Amanda Swearngin, Jeffrey P. Bigham, and Jeff Nichols. UIST 2023.



Jason Wu
Carnegie Mellon University

How might HCI engage with easy access to unintuitive statistical likelihoods of things?

- Hard design work to ensure that everyone benefits
- Understand how human likelihoods fit into and shape our interactions
- Tools and methods for designing generative AI outputs
- Define new futures of interaction grounded in the present

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