Adam Goodkind

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adamgoodkind.com

Strengths

- Extensive background in NLP/machine learning, HCI, data visualization, cognitive science
- Create experiments to quantify "experience": both how to measure it and how to improve it
- Study fine-grained phenomenon to better understand cognition and interaction
- Utilize findings from experiments to make experiences more universal among users
- Design compelling visualizations to communicate complex findings

Education

2016

PhD Candidate, Northwestern University, Human-Computer Interaction

- **PIs**: Darren Gergle and Anne Marie Piper
- **Thesis**: Predicting social dynamics in online dialogue using keystroke and typing behavior [in progress]
- **Honors**: Data Science Fellow, Cognitive Science Specialist

2016
2013

MA, CUNY Graduate Center, Computational Linguistics

- **Thesis**: Utilizing Linguistic Context To Improve Typed Text Identification

2007
2003

BA, Columbia University, Religion

- **Honors**: King's Crown Award For Leadership, Dean's List: 2006, 2007

Experience

2016

Northwestern University, PhD Researcher

- Create machine learning and regression models to understand the influence of rapport and satisfaction on user behavior
- Lead a team of research assistants to design an experimental apparatus and analyze results users engaged in conversations
- Implement an iterative design process to optimize user experiences while also providing necessary data for understanding how users respond to each other
- Developed quantitative metrics to measure language timing and infer how it reflects experiences and motivations
- Utilize qualitative methodologies to evaluate survey data about impressions and experiences during conversations about recommendations
- Visualize data and results in order to make hypotheses understandable and compelling
- Modeling the relationship between neural network-generated language model quality and human cognition

2017

Northwestern University, Teaching Assistant

- Teaching experience in Human-Computer Interaction, Cognitive Science, and Sociolinguistics
- Lead discussion sections, organize office hours, provide feedback to students on assignments, and help them understand difficult concepts

2020

Vail Systems, PhD Data Science Intern

- Created experiments to empirically evaluate the subjective quality of computational text-to-speech (TTS) systems

2013 **Microsoft, Software Developer in Test Intern**

- Developed website (back- and front-end) to diagnose licensing issues with Microsoft products

2012–2008 **Goldman Sachs & Co.**, *Operations Analyst*

- Team Leader for Technology Enhancements
- Created software to streamline daily asset delivery workflow, from 3 hours to 25 minutes

Language Skills

Computer: Python, R (ggplot2, plotly, lme4), Java, C++, LaTeX, HTML, JavaScript, React, CSS

Human: Beginning proficiency in American Sign Language (ASL), Hebrew, Latin

Select Awards and Honors

2022 **Dissertation Research Support**, *Northwestern Dept. of Communication Studies*

2021 **Incubation Prize**, *Hack4Rare Rare Disease Hackathon*

2018 **Best Paper Award**, *Cognitive Modeling & Computational Linguistics Workshop*

2014 **Google Lime Connect Scholarship–Finalist**

2007 **King's Crown Award: Outstanding Leadership**, *Columbia University*

Selected Publications (See Google Scholar for full list)

Adam Goodkind. Typeshift: A user interface for visualizing the typing production process. *arXiv preprint arXiv:2103.04222*, 2021.

Adam Goodkind and Klinton Bicknell. Local word statistics affect reading times independently of surprisal. *arXiv preprint arXiv:2103.04469*, 2021.

Adam Goodkind. An analytic model for human subjective judgements of computer-generated synthetic voice (TTS) quality. Technical report, Vail Systems, Chicago, IL, 2020.

Adam Goodkind and Klinton Bicknell. Predictive power of word surprisal for reading times is a linear function of language model quality. In *Proceedings of the 8th Workshop on Cognitive Modeling and Computational Linguistics (CMCL 2018)*, pages 10–18, 2018.

Adam Goodkind, Michelle Lee, Gary E Martin, Molly Losh, and Klinton Bicknell. Detecting language impairments in autism: A computational analysis of semi-structured conversations with vector semantics. *Proceedings of the Society for Computation in Linguistics (SCiL) 2018*, pages 12–22, 2018.

Adam Goodkind, David Guy Brizan, and Andrew Rosenberg. Utilizing overt and latent linguistic structure to improve keystroke-based authentication. In *Image and Vision Computing: Best of Biometrics Special Issue*, volume 58, pages 230–238. Elsevier, 2017.