Andrew McNutt
Assistant Professor of HCI & Visualization

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Education

University of Chicago	Chicago, IL
Ph.D., Computer Science *(Advisor Ravi Chugh)*	*2017 to 2023*
Masters of Science, Computer Science *(Advisor Gordon Kindlmann)*	*2017 to 2019*

Reed College	Portland, OR
Bachelor of Arts, Physics *(Advisor Nelia Mann)*	*2010 to 2014*

Professional & Research Experience

2024 to	**University of Utah**, *Assistant Professor*
2023 to 2024	**University of Washington**, *Post Doctoral Scholar*
	Supervised by Jeffrey Heer and Leilani Battle
2022	**Microsoft Research**, *Intern*
	Supervised by Chenglong Wang, Rob DeLine, and Steven M. Drucker
2019	**Tableau Research**, *Intern (Visual Analytics)*
	Supervised by Michael Correll
2015 to 2017	**Uber**, *Data Visualization Engineer II*
2014 to 2015	**Collaborative Drug Discovery**, *Scientific Visualization Developer*

Funding

2024	**NSF CISE Core III**: Medium: Towards Provably Effective Visualization Design. PI Battle, Co-PIs McNutt, Heer (Utah $400k / Mine $400k / Full $1.2m)
2023	**Postdoc Research Award** *University of Washington* (∼$7,000)
2022	**Doctoral Colloquium Fellowship** . *IEEE VIS* (∼$4,000).
2021	**Graduate Council Research Fund**. *UChicago Grad* ($400).
2020	**Graduate Council Travel Fund**. *UChicago Grad* ($400).

Awards

2025	**Best Paper**. *IEEE VIS* for *ReVISit 2* (VIS25)
	Best Paper Honorable Mention. *ACM SIGCHI* for *Slowness, Politics, and Joy* (CHI25)
2023	**Siebel Scholars Class of 2023 ($35,000)**. *Siebel.*
2022	**Long List in the Business Intelligence Category**. *Information is Beautiful Awards.*
2021	**Best Paper Honorable Mention**. *EuroVIS* for *What are Table Cartograms Good for Anyway?* (EuroVis21)
2020	**Best Poster Honorable Mention**. *IEEE VIS* for *A Minimally Constrained Optimization Algorithm for Table Cartograms* (VIS20)
	Best Paper Honorable Mention. *ACM SIGCHI* for *Surfacing Visualization Mirages* (CHI20)
2019	**Best Poster in Visualization (∼$200)**. *MindBytes Research Symposium.*
	Long List for Visual Analytics and Unusual Categories. *Information is Beautiful Awards.*
	Teaching Assistant Prize. *University of Chicago, Department of Computer Science.*
	2nd Place for Best in Show. *UChicago Art and Science Expo.*
2019-	**11 Special Recognitions for Outstanding Reviews**. *CHI, VIS, UIST*
2014	**Commendation of Academic Excellence**. *Reed College.*

Peer-Reviewed Full Journal and Conference Papers

Underline indicates University of Utah student

2026 **Towards Scalable Visual Data Wrangling via Direct Manipulation**
El Kindi Rezig, Mir Mahathir Mohammad, Nicolas Baret, Ricardo Mayerhofer, **Andrew McNutt**, Paul Rosen. Conference on Innovative Data Systems Research (CIDR). 2026

2025 **ReVISit 2: A Full Experiment Life Cycle User Study Framework**
Zach Cutler, Jack Wilburn, Hilson Shrestha, Yiren Ding, Brian C Bollen, Khandaker Abrar Nadib, Tingying He, **Andrew McNutt**, Lane Harrison, Alexander Lex. IEEE Transaction on Visualizations and Computer Graphics (proceedings of VIS). Nov. 2025 ★ Best Paper ★ (Top 5/666)

Accessible Text Descriptions for UpSet Plots
Andrew McNutt, Maggie K. McCracken, Ishrat Jahan Eliza, Daniel Hajas, Jake Wagoner, Nate Lanza, Jack Wilburn, Sarah Creem-Regehr, Alexander Lex. Computer Graphics Forum (proceedings of EuroVIS). June 2025

Slowness, Politics, and Joy: Values That Guide Technology Choices in Creative Coding Classrooms **Andrew McNutt**, Sam Cohen, Ravi Chugh. ACM Conference on Human Factors in Computing Systems (SIGCHI). May 2025 ★ Honorable Mention for Best Paper ★ (top 5%)

2024 **Mixing Linters with GUIs: A Color Palette Design Probe**
Andrew McNutt, Maureen Stone, Jeffrey Heer. IEEE Transaction on Visualizations and Computer Graphics (proceedings of VIS). Oct. 2024

What Can Interactive Visualization do for Participatory Budgeting in Chicago?
Alex Kale, Danni Liu, Maria Gabriela Ayala, Harper Schwab, **Andrew McNutt**. IEEE Transaction on Visualizations and Computer Graphics (proceedings of VIS). Oct. 2024

Considering Visualization Example Galleries
Junran Yang, **Andrew McNutt**, Leilani Battle. IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). Sept. 2024

How Do Data Analysts Respond to AI Assistance? A Wizard-of-Oz Study
Ken Gu, Madeleine Grunde-McLaughlin, **Andrew McNutt**, Jeffrey Heer, Tim Althoff. ACM Conference on Human Factors in Computing Systems (SIGCHI). May 2024

2023 **Projectional Editors for JSON DSLs**
Andrew McNutt, Ravi Chugh. IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC). Oct. 2023

Metrics-Based Evaluation and Comparison of Visualization Notations
Nicolas Kruchten, **Andrew McNutt**, Michael McGuffin. IEEE Transaction on Visualizations and Computer Graphics (proceedings of VIS). Oct. 2023

On the Design of AI-powered Code Assistants for Notebooks
Andrew McNutt, Chenglong Wang, Rob DeLine, Steven M. Drucker. ACM Conference on Human Factors in Computing Systems (SIGCHI). April 2023

A Study of Editor Features in a Creative Coding Classroom
Andrew McNutt, Anton Outkine, Ravi Chugh. ACM Conference on Human Factors in Computing Systems (SIGCHI). April 2023

Doom or Deliciousness: Challenges and Opportunities for Visualization in the Age of Generative Models. Victor Schetinger, Sara Di Bartolomeo, Mennatallah El-Assady, **Andrew McNutt**, Matthias Miller, João Paulo Apolinário Passos, Jane L. Adams. Computer Graphics Forum (proceedings of EuroVIS) 2023.

2022 **No Grammar to Rule Them All: A Survey of JSON-style DSLs for Visualization**
Andrew McNutt. IEEE Transaction on Visualizations and Computer Graphics (proceedings of VIS). Oct. 2022.

Goethe and Candolle: National Forms of Scientific Writing?
Agatha Kim, **Andrew McNutt**. Theory in Biosciences. August 2022.

Explaining Why: How Instructions and User Interfaces Impact Annotator Rationales When Labeling Text Data. Jamar L. Sullivan Jr., Will Brackenbury, Kevin Bryson, Kwam Byll, **Andrew McNutt**, Yuxin Chen, Michael L. Littman, Chenhao Tan, Blase Ur. Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL). July 2022.

2021 **KondoCloud: Improving Information Management in Cloud Storage via Recommendations Based on File Similarity**. Will Brackenbury, **Andrew McNutt**, Kyle Chard, Aaron Elmore, Blase Ur. ACM Symposium on User Interface Software and Technology (UIST). Oct. 2021.

What are Table Cartograms Good for Anyway? An Algebraic Analysis
Andrew McNutt. Computer Graphics Forum (proceedings of EuroVis). June 2021. ★ Honorable Mention for Best Paper ★ (juried — top 2)

Integrated Visualization Editing via Parameterized Declarative Templates
Andrew McNutt, Ravi Chugh. ACM Conference on Human Factors in Computing Systems (SIGCHI). May 2021.

2020 **Surfacing Visualization Mirages**
Andrew McNutt, Gordon Kindlmann, Michael Correll. ACM Conference on Human Factors in Computing Systems (SIGCHI). April 2020. ★ Honorable Mention for Best Paper ★ (top 5%)

2015 **The Schrodinger-Newton System with Self-field Coupling**
Joel Franklin, Youdan Guo, **Andrew McNutt**, Allison Morgan. Journal of Classical and Quantum Gravity. 2015.

Open source Bayesian models. 1. Application to ADME/Tox and Drug Discovery Datasets
Alex M. Clark, Krishna Dole, Anna Coulon-Spektor, **Andrew McNutt**, George Grass, Joel S. Freundlich, Robert C. Reynolds, Sean Ekins. Journal of Chemical Information and Modeling. 2015.

Peer Reviewed Short Papers

2025 **AnnoGram: An Annotative Grammar of Graphics Extension**
Md Dilshadur Rahman, Md Rahat-uz- Zaman, **Andrew McNutt**, Paul Rosen. Proceedings of IEEE VIS, Short Papers. Nov. 2025.

Keyframer: A Design Probe for Exploring LLM Assistance in 2D Animation Design
Tiffany Tseng, Ruijia Cheng, **Andrew McNutt**, Jeffrey Nichols. IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC) (Short). Sept. 2025.

2021 **On The Potential of Zines as a Medium for Visualization**
Andrew McNutt. Proceedings of IEEE VIS, Short Papers. Oct. 2021.

Peer Reviewed Workshop Papers, Extended Abstracts, Demonstrations, and Posters

2025   **Teaching Critical Visualization: A Field Report**
Andrew McNutt, Shiyi He, Sujit Kumar Kamaraj, Purbid Bambroo, Nastaran Jadidi, John Bovard, Chang Han. EduVis. Nov. 2025. Workshop Paper

Charts and Measures
Andrew McNutt. alt.vis. Nov. 2025. Workshop Paper

The Feng Shui of Visualization: Design the Path to SUCCESS and GOOD FORTUNE
Chang Han, **Andrew McNutt**. alt.vis. Nov. 2025. Workshop Paper

Language-Based Dependency-Tracking for Explorables
Roly Perera, Joseph Bond, Cristina David, **Andrew McNutt**, Alfonso Piscitelli. LIVE Workshop. Sept. 2025. Workshop Presentation

Authoring Tools for Transparent Climate Reporting
Roly Perera, Joseph Bond, Cristina David, **Andrew McNutt**, Alfonso Piscitelli. ACM SIGPLAN International Workshop on Programming for the Planet. Oct. 2025. Abstract

Buckaroo: A Direct Manipulation Visual Data Wrangler
Annabelle Warner, **Andrew McNutt**, Paul Rosen, El Kindi Rezig. VLDB Demo. Sept. 2025. Demo

Critical Data Visualization—Part I/II
Georgia Panagiotidou, **Andrew McNutt**, Derya Akbaba, Nicole Hengesbach, Miriah Meyer. Computer Graphics & Applications. Summer. 2025. Special Issue(s) Introduction

ReVISitPy: Python Bindings for the reVISit Study Framework
Hilson Shrestha, Jack Wilburn, Brian Bollen, **Andrew McNutt**, Alexander Lex, Lane Harrison. EuroVIS Posters. June 2025. Poster.

Linting is People! Exploring the Potential of Human Computation as a Sociotechnical Linter of Data Visualizations
Anamaria Crisan, **Andrew McNutt**. alt.CHI. April 2025. Extended Abstract.

2023   **Only YOU Can Make IEEE VIS Environmentally Sustainable**
Elsie Lee-Robbins, **Andrew McNutt**. alt.vis. Oct. 2023. Workshop Paper.

2021   **Visualization for Villainy**
Andrew McNutt, Lilian Huang, Kathryn Koenig. alt.vis. Oct. 2021. Workshop Paper.

2020   **Supporting Expert Close Analysis of Historical Scientific Writings: A Case Study for Near-by Reading** **Andrew McNutt**, Agatha Kim, Sergio Elahi, Kazutaka Takahashi. IEEE VIS Visualization for the Digital Humanities Workshop. Oct. 2020. Workshop Paper.

A Minimally Constrained Optimization Algorithm for Table Cartograms
Andrew McNutt, Gordon Kindlmann. InfoVis Posters. Oct. 2020. Poster. ★ Honorable Mention for Best Poster ★ (juried — top 3)

Divining Insights: Visual Analytics Through Cartomancy
Andrew McNutt, Anamaria Crisan, Michael Correll. alt.CHI. April 2020. Extended Abstract.

2019 **Textual Analysis & Comparison National Forms of Scientific Texts: Goethe + de Candolle**
Agatha Kim, **Andrew McNutt**, S. Sergio Elahi, Kazutaka Takahashi, Robert J Richards. MindBytes Research Symposium. November 2019. Poster. ★ Best Poster in Visualization ★

Improving the Scalability of Interactive Visualization Systems for Exploring Threaded Conversations. **Andrew McNutt**, Gordon Kindlmann. EuroVis Posters. June 2019. Poster.

2018 Linting for Visualization: Towards a Practical Automated Visualization Guidance System
Andrew McNutt, Gordon Kindlmann. IEEE VIS VisGuides Workshop. Oct. 2018. Workshop Paper.

Book Chapters

2018 Data Mining and Computational Modeling of High-Throughput Screening Datasets
Sean Ekins, Alex M Clark, Krishna Dole, Kellan Gregory, **Andrew McNutt**, Anna Coulon Spektor, Charlie Weatherall, Nadia K Litterman, Barry A Bunin. Reporter Gene Assays. 2018.

Patents

2023 Surfacing visualization mirages
Michael Correll, **Andrew McNutt**. US20210081874A1. Sept. 2023.

Theses

2023 Understanding and Enhancing JSON-based DSLs for Visualization
Advised by Ravi Chugh. Ph.D. Thesis. University of Chicago. August 2023.

2019 Design and Analysis of Table Cartograms: Multipurpose Tabular Area-Encoding Displays
Advised by Gordon Kindlmann. Master of Science Thesis. University of Chicago. December 2019.

2014 Nonequivalent Lagrangian Mechanics
Advised by Nelia Mann. Bachelor of Arts Thesis. Reed College. June 2014.

Panels

2024 Visualization for Villainy. Data Visualization Society Book Club. December. *Panelists*: **Andrew McNutt**. *Org*: Elsie Lee-Robbins, Daria Koshkina

VIS Conference Futures: Community Opinions on Recent Experiences, Challenges, and Opportunities for Hybrid Event Formats. IEEE VIS Panel. Oct. *Org*: Matthew Brehmer, Narges Mahyar. *Panelists*: Tim Dwyer, John Guerra-Gomez, Petra Isenberg, Takayuki Itoh, Elsie Lee-Robbins, **Andrew McNutt**.

VisInPractice: How do we close the gap between data visualization research and practitioners. IEEE VIS Panel. Oct. *Org*: Ayan Biswas, Arjun Srinivasan *Panelists*: Alberto Cairo, Cindy Xiong, **Andrew McNutt**.

Tutorials

2025   Running Online User Studies with the reVISit Framework. IEEE VIS. Oct. Jack Wilburn, Hilson Shrestha, <u>Zach Cutler</u>, Yiren Ding, Tingying He, **Andrew McNutt**, Lane Harrison, Alexander Lex.

      Running Online User Studies with the reVISit Framework. EuroVIS. June. Jack Wilburn, Hilson Shrestha, <u>Zach Cutler</u>, Yiren Ding, Tingying He, **Andrew McNutt**, Lane Harrison, Alexander Lex.

Advising / Mentoring

PhD

2024-	Shiyi He	University of Utah
2025-	Zach Cutler (Co-advised with Alexander Lex)	University of Utah
2025-	Nathania (Tia) Josephine	University of Utah

MS

2025-	Hima Mynampaty	University of Utah

Undergraduates

2024	Ann Baturytski	University of Washington
2024	Shaoming (Ramses) Lee	University of Washington

Teaching

Instructor

2026 Spring	Critical HCI and Visualization	CS6967	University of Utah (TBD)
Spring	Visualization Seminar	CS7942	University of Utah (TBD)
2025 Fall	Programming for All 1†	COMP1010	University of Utah (108)
Fall	Visualization Seminar	CS7942	University of Utah (7)
Spring	Critical HCI and Visualization*	CS6967	University of Utah (7)
2024 Fall	Programming for All 1	COMP1010	University of Utah (105)
2021 Winter	Data Visualization For Public Policy	CAPP 30239	UChicago (29 students)
2020 Spring	Data Visualization	CMSC 23900	UChicago (55 students)
Winter	Data Visualization For Public Policy†	CAPP 30239	UChicago (24 students)
2016-2017	Uberversity		Uber
2015-2017	Visualization Eng-ucation		Uber

New Course*, Significant Updates†

Teaching Assistant

2023 Spring	Data Visualization and Communication	DATA 22700	UChicago
2022 Winter	Creative Coding	CMSC 11111	UChicago
2021 Summer	Introduction to Creative Coding	CMSC 19111	Pre-College Immersion (HS)
Summer	Art with Science: Creative Coding		Collegiate Scholars Program (HS)
Spring	Creative Coding	CMSC 11111	UChicago
2019 Spring	Data Visualization	CMSC 23900	UChicago
Winter	Data Visualization For Public Policy	CAPP 30239	UChicago
2018 Fall	Computer Science with Applications 1	CAPP 30121	UChicago
Spring	Data Visualization	CMSC 23900	UChicago
Winter	Introduction to Computer Science 1	CMSC 15100	UChicago
2017 Fall	Computer Science with Applications 1	CMSC 12100	UChicago
2012 Fall	General Physics I	Physics 101	Reed College

Service

Program Committee

ACM SIGCHI	Full Papers (26 ★^{2})
EuroVis	Full Papers (25, 26), Short Papers (25, 26)
IEEE VIS	Full Papers (24, 25), VDS (24), VisGuides (22), EduVIS (25), alt.vis (21, 22, 23, 25)
Info+	Full Submissions (25)

Organizing Committee

IEEE VIS	Web Chair		2026
VISIONs	Organizer	IEEE VIS workshop	2024
Info+	Zine Chair		2023
alt.vis	Lead Organizer	IEEE VIS workshop	2022, 23, 25

Awards Committee

EuroVis	Best Short Paper (25)

External Reviewing

CHI	Full Papers (21 ★ , 22 ★^{2}, 23 ★^{3}, 24 ★, 25), alt.chi (20, 25), Late-Breaking Work (22)
EuroVis	Full Papers (23)
UIST	Full Papers (21 ★)
VIS	Full Papers (20, 21, 22, 23 ★), Short Papers (20, 21), alt.vis (21)
Journal	CG&A (23, 24), JOVI (23-25), TVCG (22, 24, 25)

★ - Special Recognition for Outstanding Review

Professional Service

2025	**4 Corners VIS** (Regional Professional Meeting)	Organizer
2025	**CG&A Special Issue on Critical Vis x2**	Guest Editor
2023-	**Open Grad Positions in Visualization**	Maintainer
2024-	**Journal of Visualization and Interaction**	Associate Editor
2024	**IEEE VIS Satellite**	Organizer
2021	**EuroVis**	Student Volunteer
2019	**Open Access VIS / EuroVis**	Contributor / Organizer

Session chairing: EuroVis 2025

Internal Service

2025-	HCC Track	Director
2024-	Curriculum committee	Member
2024-	Admissions committee	Member
2024	Grad Open House (Nov. 15th)	Speaker
2024	Graduate Student Mentoring (Sept 16)	Panelist
2024	Orientation Week	Speaker

Doctoral Thesis Committees

2025	Connor Scully-Allison (Adv. Katherine Isaacs)	University of Utah
2026*	Md Dilshadur Rahman (Adv. Paul Rosen)	University of Utah
2026*	Rifat Ara Proma (Adv. Paul Rosen)	University of Utah
2026*	Aashish Panta (Adv. Valerio Pascucci)	University of Utah
2026*	Xinyuan Yan (Adv. Bei Wang)	University of Utah
2027*	Shadmaan Hye (Adv. Katherine Isaacs)	University of Utah
2027*	Sharmin Ahmed (Adv. Sameer Patil)	University of Utah

*Expected

Invited Talks

2025 **Linters as Sociotechnical Systems**
King's College London, June 2024, London, England
giCentre, June 2024, London, England
University of Bristol, June 2024, Bristol, England

Two talks about JSON DSLs for visualization
University of Utah, Salt Lake City, Utah

2024 **Safer Data Interfaces with Linters**
Tableau Research, June, 2024, Seattle, Washington.

2023 **JSON-based DSLs and the Future of End User Programming**
Microsoft Research, November, 2023, Cambridge, England.

Projectional Editors for JSON-based DSLs
Vega Conf, September, 2023, Seattle, Washington.

Safer Interfaces for Data Visualization
University of California Berkeley, May, 2023, Berkeley, California.
Microsoft Research, April, 2023, Cambridge, England (Virtual).
Roux Institute, March, 2023, Portland, Maine.
University of Utah, February, 2023, Salt Lake City, Utah.

2022 **Understanding & Enhancing JSON-based DSL Interfaces for Visualization**.
Shandong University, November 15, 2022, Qingdao, China. (Virtual)
IEEE VIS Doctoral Colloquium, October 15, 2022, Oklahoma City, Oklahoma.

How do we know what a visualization is good for? Algebraic Approaches.
RAMPVIS, August 5, 2021, Oxford, England. (Virtual)

What are Table Cartograms Good for Anyway? An Algebraic Analysis.
City University London, May 18, 2021, London, England. (Virtual)

Integrated Visualization Editing via Parameterized Declarative Templates.
University of California: Berkeley, November, 2021, Berkeley, California (Virtual)
CHIcago Symposium, May, 2021, Chicago, Illinois (Virtual)

2018 **Design Patterns For Data Visualization in React**.
React Chicago, August 29, 2018, Chicago, Illinois.

Professional Development

2025	Vis Summer Camp	VGTC
2023	College Teaching Certificate	UChicago Center for Teaching