Andrew McNutt
Professor in HCI & Visualization
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amcnutt@uw.edu
mcnutt.in

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*
2013	**Reed College**, *Undergraduate Researcher*

Awards

2023	**Postdoc Research Award (∼$7,000)** *University of Washington*
2022	**Siebel Scholars Class of 2023 ($35,000)**. *Siebel.*
	Doctoral Colloquium Fellowship (∼$4,000). *IEEE VIS.*
	Long List in the Business Intelligence Category. *Information is Beautiful Awards.*
2021	**Graduate Council Research Fund ($400)**. *UChicago Grad.*
	Best Paper Honorable Mention. *EuroVis.*
	for *What are Table Cartograms Good for Anyway? An Algebraic Analysis* (EuroVis21)
2020	**InfoVis Best Poster Honorable Mention for Research**. *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.*
	Graduate Council Travel Fund ($400). *UChicago Grad.*
	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.*
2014	**Commendation of Academic Excellence**. *Reed College.*

Peer-Reviewed Journal and Conference Papers

2024   **Mixing Linters with GUIs: A Color Palette Design Probe**
Andrew McNutt, Maureen Stone, Jeffrey Heer. IEEE VIS. October 2024

What Can Interactive Visualization do for Participatory Budgeting in Chicago?
Alex Kale, Danni Liu, Maria Gabriela Ayala, Harper Schwab, **Andrew McNutt**. IEEE VIS. October 2024

Considering Visualization Example Galleries
Junran Yang, **Andrew McNutt**, Leilani Battle. IEEE VL/HCC. September 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 CHI. May 2024

2023   **Projectional Editors for JSON DSLs**
Andrew McNutt, Ravi Chugh. IEEE VL/HCC. October 2023

Metrics-Based Evaluation and Comparison of Visualization Notations
Nicolas Kruchten, **Andrew McNutt**, Michael McGuffin. IEEE VIS. October 2023

On the Design of AI-powered Code Assistants for Notebooks
Andrew McNutt, Chenglong Wang, Rob DeLine, Steven M. Drucker. ACM CHI. April 2023

A Study of Editor Features in a Creative Coding Classroom
Andrew McNutt, Anton Outkine, Ravi Chugh. ACM CHI. 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. EuroVIS 2023.

2022   **No Grammar to Rule Them All: A Survey of JSON-style DSLs for Visualization**
Andrew McNutt. IEEE VIS. October 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. 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 UIST. October 2021.

On The Potential of Zines as a Medium for Visualization
Andrew McNutt. IEEE VIS Short Papers. October 2021.

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

Integrated Visualization Editing via Parameterized Declarative Templates
Andrew McNutt, Ravi Chugh. ACM CHI. May 2021.

2020   **Surfacing Visualization Mirages**
Andrew McNutt, Gordon Kindlmann, Michael Correll. ACM CHI. 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.

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.

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.

Patents

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

Workshop Papers, Extended Abstracts, and Posters

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

2021 **Visualization for Villainy**
Andrew McNutt, Lilian Huang, Kathryn Koenig. alt.vis. October 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. October 2020. Workshop Paper.

A Minimally Constrained Optimization Algorithm for Table Cartograms
Andrew McNutt, Gordon Kindlmann. InfoVis Posters. October 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. Poster. June 2019.

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

Service & Volunteering

Reviewing (External + Committee)

CHI	Full Papers (21 ★ , 22 ★[2], 23 ★[3], 24 ★), alt.chi (20), Late-Breaking Work (22)
EuroVis	Full Papers (23)
UIST	Full Papers 21 (★)
VIS	Full Papers (20, 21, 22, 23 ★, 24), Short Papers (20, 21)
	alt.vis (21, 22, 23), VDS (24), VisGuides (22), VISions (24)
Journal	CG&A (23, 24), JOVI (24, 24), TVCG(22, 24)

★ - Special Recognition for Outstanding Review

Professional Service

2025	**CG&A Special issue on Critical Vis**	Guest Editor
2024-	**Journal of Visualization and Information**	Associate Editor
2024	**VISions of the Future** (VIS Workshop)	Organizing Committee
	Visualization in Data Science (VIS Workshop)	Program Committee
	IEEE VIS	Full Papers Program Committee
2023	**alt.vis** (VIS Workshop)	Organizing Committee
	Information+ Conference	Organizing Committee
2022	**alt.vis** (VIS Workshop)	Organizing Committee
	VisGuides (VIS Workshop)	Program Committee
2021	**EuroVis**	Student Volunteer
2019	**Open Access VIS / EuroVis**	Contributor / Organizer

Doctoral Thesis Committees

Expected 2025	Md Dilshadur Rahman	University of Utah

Advising / Mentoring

Undergraduates

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

Teaching

Instructor

2024 Fall	Programming for All 1	COMP1010	University of Utah
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

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

Professional Development

2023	College Teaching Certificate	UChicago Center for Teaching

Presentations & Talks

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
VL/HCC, October, 2023, Washington, D.C. USA.
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.

On the Design of AI-powered Code Assistants for Notebooks
SIGCHI, April, 2023, Hamburg, Germany.

A Study of Editor Features in a Creative Coding Classroom
SIGCHI, April, 2023, Hamburg, Germany.

2022 **No Grammar to Rule Them All: A Survey of JSON-style DSLs for Visualization**.
IEEE VIS, October 19, 2022, Oklahoma City, Oklahoma.
Microsoft Research, July 14, 2022, Redmond, Washington (Virtual).

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.

2021 **On The Potential of Zines as a Medium for Visualization**.
IEEE VIS, October 27, 2021, New Orleans, Louisiana. (Virtual)

Visualization for Villainy.
alt.vis, October 24, 2021, New Orleans, Louisiana. (Virtual)

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.
EuroVis, June 15, 2021, Zurich, Switzerland. (Virtual)
City University London, May 18, 2021, London, England. (Virtual)

Integrated Visualization Editing via Parameterized Declarative Templates.
University of California: Berkeley (Chasins Lab), November 3, 2021, Berkeley, California (Virtual)
SIGCHI, May 12-13, 2021, Yokohama, Japan (Virtual)
CHIcago Symposium, May 5, 2021, Chicago, Illinois (Virtual)

2020 **Supporting Expert Close Analysis of Historical Scientific Writings: A Case Study for Near-by Reading**.
VIS4DH, October 25, 2020, Salt Lake City, Utah (Virtual)

Surfacing Visualization Mirages.
CHIcago Symposium, May 26, 2020, Chicago, IL (Virtual)

Divining Insights: Visual Analytics Through Cartomancy.
CHIcago Symposium, May 26, 2020, Chicago, IL (Virtual)

2019 **Design and Analysis of Table Cartograms: Simultaneous-Multipurpose Tabular Area-Encoding Displays**.
University of Chicago, June 12, 2019, Chicago, Illinois.

2018 **Linting for Visualization: Towards a Practical Automated Visualization Guidance System**.
VIS Guides, October 22, 2018, Berlin, Germany.

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