Andrew McNutt

Post Doc and incoming Professor in HCI & Visualization

Updated: September 20, 2023

e paarea. September 20, 2020

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Education

University of Chicago	Chicago, IL
Ph.D., Computer Science	2017 to 2023
Masters of Science, Computer Science	2017 to 2019

Reed College

Bachelor of Arts, Physics

Portland, OR 2010 to 2014

Professional & Research Experience

2024 to	University of Utah, Assistant Professor
2023 to 2024	University of Washington, Post Doctoral Scholar
2017 to 2023	University of Chicago, Graduate Researcher
2022	Microsoft Research, Intern
2019	Tableau Research, Intern (Visual Analytics)
2015 to 2017	Uber, Data Visualization Engineer II
2014 to 2015	Collaborative Drug Discovery, Scientific Visualization Developer
2013	Reed College, Undergraduate Researcher

Awards

2023 Special Recognition for Outstanding Review. *IEEE VIS*. Special Recognition for Outstanding Review x3. *ACM SIGCHI*.

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.

Special Recognition for Outstanding Review x2. ACM SIGCHI.

2021 Special Recognition for Outstanding Review. ACM UIST.

Graduate Council Research Fund (\$400). UChicago Grad.

Best Paper Honorable Mention. Euro Vis.

for What are Table Cartograms Good for Anyway? An Algebraic Analysis (EuroVis21)

Special Recognition for Outstanding Review. ACM SIGCHI.

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.

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 De Line, 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. 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.
- 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

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CHI Full Papers (\bigstar '21, $\bigstar \bigstar$ '22, $\bigstar \bigstar \star$ '23), alt.chi ('20), Late-Breaking Work ('22)

EuroVis Full Papers ($^{\circ}$ 23) JOVI Journal ($^{\circ}$ 23) UIST Full Papers (\bigstar $^{\circ}$ 21)

VIS Full Papers ('20, '21, '22, '23★), Short Papers ('20, '21), alt.vis ('21, '22, '23), VisGuides ('22)

TVCG Journal ('22)

 \bigstar - Special Recognition for Outstanding Review

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Se	rvice

2023	alt.vis (IEEE VIS Workshop)	Organizing Committee
	Information+ Conference	Organizing Committee
2022	alt.vis (IEEE VIS Workshop)	Organizing Committee
	VisGuides (IEEE VIS Workshop)	Program Committee
2019-2021	UChicago Visualization Reading Group	Founder and Facilitator
2021	EuroVis	Student Volunteer
2020	Chicago Public Schools CSEd Week	Speaker
2019	Open Access VIS / EuroVis	Contributor / Organizer
	South Side Civic	Scopathon Facilitator
2018	UChicago CS Grad Student Ministry	Weekly CS Coffee Break Facilitator
2014	F.L. Griffin Mathfest	Teaching Assistant

Teaching

Instructor			
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)
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2016-2017 Uberversity Speaker 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

2023 Safer Interfaces for Data Visualization

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

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.