

Abhraneel Sarma

abhraneel@u.northwestern.edu
abhsarma.github.io

Research Interests

Broadly: I am interested in studying how people make sense of uncertainty information which arise in a typical data analysis pipeline.

Recently: I developed an R package for easily specifying multiverse analyses, which helps analysts to surface the uncertainty in their data analysis process itself; I have also worked on projects which investigate how users interpret uncertainty visualisations in missing data contexts or multiple comparison scenarios

Education

- | | |
|----------------|--|
| 2019 - present | PhD, Computer Science, Northwestern University
Advisor: Jessica Hullman, Matthew Kay |
| 2016 - 2018 | Master of Science, Information, University of Michigan
HCI and Data Science specialization
Advisor: Matthew Kay
Thesis: Tell don't just show: Narratives improve recall more than interactivity for communicative visualizations |
| 2012 - 2016 | Bachelors in Design, Indian Institute of Technology Guwahati
Minor in Mechanical Engineering |

Publications

Conference publications

- | | |
|------|--|
| 2023 | multiverse: Multiplexing Alternative Data Analyses in R Notebooks (<i>In Review</i>)
Abhraneel Sarma, Alex Kale, Michael Moon, Nathan Taback, Fanny Chevalier, Jessica Hullman and Matthew Kay
CHI 2023: Conference on Human Factors in Computing Systems |
| 2022 | Evaluating the Use of Uncertainty Visualisations for Imputations of Data Missing At Random in Scatterplots
Abhraneel Sarma, Shunan Guo, Jane Hoffswell, Ryan Rossi, Fan Du, Eunyee Koh and Matthew Kay
VIS 2022: IEEE Transactions on Visualization and Computer Graphics |
| 2020 | Prior Setting in Practice: Strategies and Rationales Used in Choosing Prior Distributions for Bayesian Analysis |

Abhraneel Sarma and Matthew Kay
CHI 2020: Conference on Human Factors in Computing Systems

- 2019 **Increasing the Transparency of Research Papers with Explorable Multiverse Analyses**
Pierre Dragicevic, Yvonne Jansen, Abhraneel Sarma, Matthew Kay, and Fanny Chevalier
CHI 2019: Conference on Human Factors in Computing Systems

Work Experience

- 2019 - present **Graduate Research Assistant**
MUCollective, Northwestern University
- 2021 **Research Intern**
Adobe, Inc
Advisor: Shunan Guo
- 2016 - 2019 **Graduate Research Assistant** (*full time researcher, May 2018 onwards*)
MUCollective, University of Michigan
- 2017 **User Experience Intern**
Office of Academic Innovation, University of Michigan
- 2015 **Research Intern**
Keio-NUS CUTE Center, National University of Singapore

Teaching

- Teaching Assistant**, JOUR377 *Data Analysis and Visualization*
Northwestern University
- Graduate Student Instructor**, SI588 *Fundamentals of Human Behavior*
University of Michigan School of Information
- Graduate Student Instructor**, SI330 *Data Manipulation in Python*
University of Michigan School of Information

Invited Talks

- 2019 **Statistics and Scientific reporting: Can we do better?**
Data Camp at the University of Michigan

Service

- as a reviewer (for conferences)
2021-23 CHI

Special Recognitions for Outstanding Reviews: CHI 2021, CHI 2022

—	as a student volunteer
2018	IEEE VIS, Berlin, Germany
2017	IEEE VIS, Phoenix, AZ, USA

Grants

MSI Travel Grant, University of Michigan School of Information for CHI 2017

MSI Research Funding, University of Michigan School of Information for data collection for Master's Thesis

Skills

Technical Skills

R, JavaScript, Python, SQL, C/C++ and Latex