# Grace Guo

gguo31@gatech.edu | gracegsy.github.io | https://github.com/GraceGSy

I am interested in research at the intersection of AI, visualization and human-computer interaction. My current research focuses on developing visual analytics tools for explainable AI and causal inference.

## Education

**Georgia Institute of Technology** — *Atlanta, GA*

PhD in Human-Centered Computing — *Current*

- Advised by Dr. Alex Endert

**Carnegie Mellon University** — *Pittsburgh, PA*

BS in Cognitive Science and Human-computer Interaction — *2018*

- QPA: 3.91, Dean's List High Honors

## Awards

**IBM PhD Fellowship** — *2023-2024*

IBM Research

## Work Experience

**Georgia Institute of Technology, School of Interactive Computing** — *Atlanta, GA*

Graduate Research Assistant — *Aug 2019 - 2024 (projected)*

- Advised by Dr. Alex Endert

**International Business Machines Corporation (IBM)** — *Cambridge, MA*

Research Intern, Computational Healthcare — *May 2023 - Aug 2023*

- Developed visual analytics tools for domain-driven counterfactual explanations of AI model predictions of disease phenotypes from cardiac imaging and videos
- Manuscript under review at ACM FAccT 2024

**International Business Machines Corporation (IBM)** — *Cambridge, MA*

Research Intern, Computational Healthcare — *May 2022 - Aug 2022*

- Worked with the IBM Healthcare Analytics team on causal inference problems
- Developed Causalvis, an open source Python visualization package to support causal inference analysis
- Manuscript published and presented at ACM CHI 2023

**Pacific Northwest National Laboratory** — *Richland, WA*

Research Intern, National Security Internship Program — *May. 2020 - Aug 2020*

- Designed and implemented DietParselantro, a Jupyter widget for textual data classification
- Implemented VAINE, a system for interactively estimating causal effects in natural experiments
- Manuscript (VAINE) published and presented at IEEE VIS 2021

**Singapore University of Technology and Design** — *Singapore*

Researcher, Meta-design Lab — *Aug. 2018 - Aug. 2019*

- Studied the role of data visualizations in industry decision making
- Created an open source svelte visualization toolkit for flexible, componentized data visualization

## Publications

**Visualizing Intelligent Tutor Interactions for Responsive Pedagogy**

Grace Guo, Aishwarya Mudgal Sunil Kumar, Adit Gupta, Adam Coscia, Chris MacLellan, Alex Endert

ACM Advanced Visual Interfaces (AVI). 2024.

**What We Augment When We Augment Visualizations: A Design Elicitation Study of How We Visually Express Data Relationships**

Grace Guo, John Stasko, Alex Endert

ACM Advanced Visual Interfaces (AVI). 2024.

**Situating Datasets: Making Public Eviction Data Actionable for Housing Justice**

Anh-Ton Tran, Grace Guo, Jordan Taylor, Katsuki Andrew Chan, Elora Lee Raymond, Carl DiSalvo

ACM Conference on Human Factors in Computing Systems (CHI). 2024.

**Causalvis: Visualizations for Causal Inference**

Grace Guo, Ehud Karavani, Alex Endert, Bum Chul Kwon

ACM Conference on Human Factors in Computing Systems (CHI). 2023.

**VAINE: Visualization and AI for Natural Experiments**

Grace Guo, Maria Glenski, ZhuanYi Shaw, Emily Saldanha, Alex Endert, Svitlana Volkova, Dustin Arendt

IEEE Visualization Conference (VIS). 2021.

**A Survey of Human-Centered Evaluations in Human-Centered Machine Learning**

Fabian Sperrle, Mennatallah El-Assady, Grace Guo, Rita Borgo, Duen Horng Chau, Alex Endert, Daniel Keim

Computer Graphics Forum (EuroVis). 2021.

**Florence: a Web-based Grammar of Graphics for Making Maps and Learning Cartography**

Ate Poorthuis, Lucas Van der Zee, Grace Guo, Jo Hsi Keong, Bianchi Dy

Cartographic Perspectives. December 2020.

## Talks

**Causalvis: Visualizations for Causal Inference**

Making Sense & Decisions with Visualization

ACM Conference on Human Factors in Computing Systems (CHI). 2023.

**Flexible and Expressive Augmentation of Domain Specific Visualizations**

Doctoral Colloquium

IEEE Visualization Conference (VIS). 2022.

**VAINE: Visualization and AI for Natural Experiments**

AI+VIS

IEEE Visualization Conference (VIS). 2021.

**Survey of Evaluations in Human-Centered Machine Learning: Dimensions for Measuring Trust, Interpretability and Explainability**

STARs

EuroVis. 2021.