Grace Guo

gguo31@gatech.edu | gracegsy.github.io

I am interested in research at the intersection of AI, learning sciences and human-computer interaction. My current projects focus on AI for online education, causal inference, and visual analytics.

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

Work Experience

Georgia Institute of Technology, School of Interactive Computing *Atlanta, GA*
Graduate Research Assistant *Aug 2019 - Current*
- Advised by Dr. Alex Endert

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 analysts
- Conducted user studies and submitted study manuscript to 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

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

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.

Teaching

CS4460: Introduction to Information Visualization   *Atlanta, GA*

Georgia Institute of Technology   *Spring 2023*

CS7455: Issues in Human-Centered Computing   *Atlanta, GA*

Georgia Institute of Technology   *Spring 2022*

CS4873: Computing, Society and Professionalism   *Atlanta, GA*

Georgia Institute of Technology   *Summer 2021*

CS7450: Information Visualization   *Atlanta, GA*

Georgia Institute of Technology   *Fall 2020*

15-112: Fundamentals of Programming and CS   *Pittsburgh, PA*

Carnegie Mellon University   *Fall 2015, Spring 2016*

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.

Skills

Frameworks and Libaries	React, D3, WebGL, IPywidgets, Vue, Svelte
Programming	Python, Javascript, C
Tools	Git, Jupyter Lab, Adobe Suite
Research	Surveys, Interviews, Think-alouds, Expert Evaluations
Design	Affinity Diagramming, Prototyping, Wireframing, Participatory Design