

Grace Guo

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

Education

Georgia Institute of Technology

PHD IN HUMAN-CENTERED COMPUTING

- Advised by Dr. Alex Endert

Atlanta, GA

Current

Carnegie Mellon University

BS IN COGNITIVE SCIENCE AND HUMAN-COMPUTER INTERACTION

- QPA: 3.91, Dean's List High Honors

Pittsburgh, PA

2018

Work Experience

Georgia Institute of Technology, School of Interactive Computing

GRADUATE RESEARCH ASSISTANT

- Advised by Dr. Alex Endert

Atlanta, GA

Aug 2019 - Current

International Business Machines Corporation (IBM)

RESEARCH INTERN, COMPUTATIONAL HEALTHCARE

- 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

Cambridge, MA

May 2022 - Aug 2022

Pacific Northwest National Laboratory

RESEARCH INTERN, NATIONAL SECURITY INTERNSHIP PROGRAM

- Designed and implemented DietParseLantro, a Jupyter widget for textual data classification
- Implemented VAINE, a system for interactively estimating causal effects in natural experiments

Richland, WA

May. 2020 - Aug 2020

Singapore University of Technology and Design

RESEARCHER, META-DESIGN LAB

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

Singapore

Aug. 2018 - Aug. 2019

Publications

Causalvis: Visualizations for Causal Inference

GRACE GUO, EHUD KARAVANI, ALEX ENDERT, BUM CHUL KWON

ACM CHI. 2023. (Under Review)

A Design Elicitation Study for Understanding User Designs and Considerations when Augmenting Visualizations

GRACE GUO, JOHN STASKO, ALEX ENDERT

ACM CHI. 2023. (Under Review)

Situating Insights: Constructing Community Engaged Housing Visualizations

ANHTON TRAN, GRACE GUO, KATSUKI CHAN, CARL DiSALVO

ACM CHI. 2023. (Under Review)

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

CS7455: Issues in Human-Centered Computing

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA
Spring 2022

CS4873: Computing, Society and Professionalism

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA
Summer 2021

CS7450: Information Visualization

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA
Fall 2020

15-112: Fundamentals of Programming and CS

CARNEGIE MELLON UNIVERSITY

Pittsburgh, PA
Fall 2015, Spring 2016

Talks

Flexible and Expressive Augmentation of Domain Specific Visualizations

DOCTORAL COLLOQUIUM
IEEE Visualization Conference (VIS). 2022. (Upcoming)

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 Libraries Vue, Svelte, React, D3, IPywidget

Programming Python, Javascript, C

Tools Git, Jupyter Lab, Adobe Suite

Research Surveys, Interviews, Think-alouds, Expert Evaluations

Design Affinity Diagramming, Prototyping, Wireframing, Participatory Design