

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 AI for online education, 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

Awards

IBM PhD Fellowship

IBM RESEARCH

2023-2024

Work Experience

Georgia Institute of Technology, School of Interactive Computing

GRADUATE RESEARCH ASSISTANT

- Advised by Dr. Alex Endert

Atlanta, GA

Aug 2019 - 2024 (projected)

International Business Machines Corporation (IBM)

RESEARCH INTERN, COMPUTATIONAL HEALTHCARE

- 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

Cambridge, MA

May 2023 - Aug 2023

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 analysis
- Manuscript published and presented at 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
- Manuscript (VAINE) published and presented at IEEE VIS 2021

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 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 BORGIO, 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.

Teaching

CS4460: Introduction to Information Visualization

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

Spring 2023

CS7455: Issues in Human-Centered Computing

GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

Spring 2022

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