

Po-Ming "Terrance" Law

Website: <https://terrancelaw.github.io>

Email: pmlaw@gatech.edu

Skills

Programming: JavaScript, CSS, D3.js, front-end web frameworks (e.g., React), Python, Git

Design: Visualization design, web application architecture design, interface design, interaction design, Adobe Illustrator

Qualitative Research: Human-centered design, interview, surveys, affinity diagramming, qualitative coding, grounded theory, storyboarding, prototyping

Quantitative Research: Usability testing, experiment design, statistical analysis (e.g., ANOVA, MANOVA, regression, PCA, and EFA), R, SPSS

Education

Georgia Institute of Technology • Atlanta, GA

Aug 2016 – May 2021

Ph.D in Computer Science

Focus: Human-Computer Interaction and Data Visualization

Minor in Statistics

The Hong Kong University of Science and Technology • Hong Kong

Sept 2012 – Aug 2016

B.Eng. in Computer Science

B.B.A. in General Business Management

Professional Experience

Georgia Institute of Technology • Atlanta, GA

Aug 2016 – May 2021

Research Assistant

- Developed a dozen of full-stacked web applications including
 - future spreadsheet application
 - event sequence analytics platform
 - visualization creation system
 - system for visualizing nuclear agreements
 - platform for detecting machine learning biases

- Improved data analysis workflow by interviewing and collaborating with diverse users including
visualization practitioners
healthcare informaticians
machine learning modelers
political scientists
data scientists
- Enhanced usability of future technologies by designing and conducting user experiments
- Managed logistics of and gave guest lectures to graduate-level classes with 50+ students

Adobe Inc. • San Jose, CA

May 2019 – Aug 2019

Research Intern

- Advanced understanding of needs for bias detection in machine learning models through interviews with Adobe analysts
- Facilitated the development of a platform for detecting biases in machine learning models through prototyping and usability testing

Adobe Inc. • Seattle, WA

May 2017 – Aug 2017

Research Intern

- Derived design requirements for a clickstream analysis system through prototyping and interviews with Adobe analysts
- Created and open-sourced full-stack software for visual analysis of event sequence data (<https://github.com/terrancelaw/MAQUI>)

Select Projects

Data Visualization for Nuclear Agreements

- Collaborated closely with a team of political scientists to deliver an interactive web application for analyzing nuclear agreements through weekly meetings
- The system improved data analysis workflow and enabled decision makers and political scientists to glean novel insights from nuclear cooperation data

Spreadsheet for Automated Comparison

- Investigated how people conducted pairwise comparisons through a crowdsourced study with 400+ participants
- Prototyped a scalable web-based spreadsheet application that enabled novice data analysts to conduct pairwise comparisons within tabular data

- Improved the usability of research prototypes by designing and conducting usability testing with 16 graduate students
- Software: https://duospreadsheet.github.io/sloppy_rules_final/

Visualization System for Automated Data Insights

- Interviewed 23 visualization practitioners from 19 organizations (e.g., Coca-Cola, Chick-fil-A, Comcast, and Merkle) to investigate data analysis practice and needs for automated analysis
- Designed and created research prototypes to facilitate discussions during interviews
- Research prototypes:
 - <https://terrancelaw.github.io/iQuery>
 - <https://terrancelaw.github.io/iDashboard/>
 - <https://terrancelaw.github.io/iPage/>

Conference Talks

IEEE VIS 2020 • Virtual

What are Data Insights to Professional Visualization Users?
Characterizing Automated Data Insights

SIGCHI 2020 • Virtual

Designing Tools for Semi-Automated Detection of Machine Learning Biases: An Interview Study

GI 2020 • Virtual

The Impact of Presentation Style on Human-In-The-Loop Detection of Algorithmic Bias

SIGCHI 2019 • Glasgow, Scotland

Comparing Apples and Oranges: Taxonomy and Design of Pairwise Comparisons within Tabular Data

IEEE VIS 2018 • Berlin, Germany

Duet: Helping Data Analysis Novices Conduct Pairwise Comparisons by Minimal Specification
MAQUI: Interweaving Queries and Pattern Mining for Recursive Event Sequence Exploration

IEEE VIS 2017 • Phoenix, AZ

Designing Breadth-Oriented Data Exploration for Mitigating Cognitive Biases

IEEE VIS 2016 • Baltimore, MD

VisMatchmaker: Cooperation of the User and the Computer in Centralized Matching Adjustment