

MENGYU (BONNIE) CHEN

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Research Interest

HCI, Visual Analytics, Cognitive Science, Information Behavior, Accessibility

Education

Chongqing University (CQU)

Chongqing, China

M.Eng. in Industrial Engineering (Major GPA: 3.9/4.0, Rank: Top 2%)

Sep. 2019 - Jun. 2022

- Research Area: Human-computer Interaction
- Selected Courses: User Interface Design, Data Analysis & Mining, Machine Learning, Deep Learning, Mathematical Statistics, Optimization Methods, Graph Theory
- Online Courses Provided by Coursera: Data Structure & Algorithms, Discrete Math, Systems Programming, Data Visualization, Natural Language Processing

ESIEE-Amiens

Amiens, France

Exchange Student in Industrial Engineering (GPA: 4.0/4.0)

Mar. 2019 - Jun. 2019

- Courses: Directed Research in Industrial Engineering, French

Dalian Jiaotong University (DJTU)

Liaoning, China

B.Eng. in Industrial Engineering (Major GPA: 3.9/4.0, Rank: Top 1%)

Sep. 2015 - Jul. 2019

- Selected Courses: Applied Statistics (score: 100/100), Linear Algebra (score: 100/100), Probability & Mathematical Statistics (score: 98/100), Database Principle and Application (score: 97/100), Human Factors Engineering (score: 95/100)

Publications

Bonnie Chen, Shaoqing Ge, Oleg Zaslavsky, Annie T. Chen. "Investigating Interaction Pattern in an Online Health Community for Older People". *Association for Information Science & Technology 2021, SIG USE Symposium*.

Bonnie Chen, Emily Wall. "Can You Perceive Your Ability: Analyzing Interactive Behavior Related to Dunning-Kruger Effect in Data Visualization". *IEEE Transactions on Visualization and Computer Graphics*, under review.

Bonnie Chen, Shaoqing Ge, Frances Chu, Andrew Teng, Oleg Zaslavsky, Annie T. Chen. "Investigating Interaction Pattern in an Online Health Community for Older People". *The Journal of the Association for Information Science and Technology*, under review.

Shambhavi Mahajan, **Bonnie Chen**, Alireza Karduni, Yea-Seul Kim, Emily Wall. "VIBE: A Design Space for Visual Belief Elicitation in Data Journalism". *Eurographics/IEEE Symposium on Visualization 2022*, under review.

Presentation

SIG USE Symposium at ASIS&T 2021 Conference, Virtual

Oct. 2021

Investigating Interaction Pattern in an Online Health Community for Older People [\[PDF\]](#)

Research Experience

Design Space of Belief-Driven Visualizations

Emory University, [CAV Lab](#)

Mentors: Professor [Emily Wall](#), Professor [Yea-Seul Kim](#), Dr. [Alireza Karduni](#)

Apr. – Nov. 2021

Publication: *Eurographics/IEEE Symposium on Visualization 2022*, under review

- Synthesize a design space for belief-driven visualizations based on formative and summative interviews to guide the design process
- Coded existing elicitation examples within proposed design space
- Visually demonstrated how existing belief-driven visualizations from popular news media outlets span the design space

Characterizing User Engagement

University of Washington, School of Medicine

Mentors: Professor [Annie T. Chen](#), Professor [Oleg Zaslavsky](#)

Jan. – Dec. 2021

Publication: 1. *Association for Information Science & Technology 2021, SIG USE Symposium*

2. *The Journal of the Association for Information Science and Technology*, under review

- Investigated the interaction patterns between moderators and participants within VOCALE, an online health-related community
- Combined content analysis and social network analysis to explore moderator and participant interaction patterns within VOCALE
- Used linguistic inquiry and word count analysis to investigate the difference in moderation style over three rounds of discussion

Relationship Between Cognitive Bias and Expertise

Emory University, [CAV Lab](#)

Mentor: Professor [Emily Wall](#)

Oct. 2020– Present

Publication: *IEEE Transactions on Visualization and Computer Graphics*, under review

- Replicated Dunning-Kruger effect in data-driven visual tasks using scatterplot visualization
- Detected potential behavior patterns by interaction logs using SVM & RNN
- Designed a problem-solving task and implemented the interface to extend previous work

Decision Space of Multiverse Analysis

University of Washington, [IDL Lab](#)

Mentors: Professor [Jeffrey Heer](#), Ph.D. student [Yang Liu](#)

Jul. 2021 – Present

- Construct a decision space for analysts to guide the decision process when performing multiverse analysis
- Design and evaluate techniques (e.g., role-playing, showing alternative analysis from peers) that can be used to improve ideation of analysts during decision-making process

Selected Awards and Honors

2019 – 2020 **Outstanding Graduate Student Scholarship**, Top 2% graduates in CQU

2018 **Gold Medal**, National College Mechanical Innovation Competition, Top 1%

2017 **Principal Scholarship**, Top 1% undergraduates in DJTU

2016 - 2017 **National Scholarship**, Top 1% undergraduates in DJTU

Computer Skills

Proficient in Adobe Illustrator, Matlab, Tableau, SPSS, LaTeX

Skilled in Data Management & Analytics (Python, R), Web Programming (JavaScript, HTML/CSS, Vega-Lite, D3.js, SQL, etc.), Machine Learning Models and Implementation