SHENG LONG

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EDUCATION

Northwestern University	Evanston, IL
Ph.D. in Computer Science.	Expected May 2026

William & Mary	Williamsburg, VA
B.S. in Computer Science; Economics.	May 2020

RESEARCH EXPERIENCE

Formal Anti-collusion   Dec 2021 – Present
- Studied online pricing algorithms and definitions, as well as screening criteria, for online pricing algorithms to be non-collusive

Fair admissions   Dec 2021 – Jan 2023
- Presented paper, *Screening of budgeted agents*, at EC 2022 Algorithmic Contract Design workshop

Systematic y-axis truncation   Oct 2022 – Present
- Proposed a formal framework to systematically study exaggerated visual effects of truncating y-axis in bar charts
- Designed experiments and created visual stimuli with `Altair`

Just-noticeable-differences in ML and information visualization   In progress
- Combine performance guarantees from machine learning to bound human performance on statistical inference using information visualization

Freshman Monroe Research Project, *"Another Look at Silver"*   May - Aug 2017
- Advisor: Ronald Schechter
- Conducted individual research and traced the circulation of silver bullions in 16th to 18th century in rural China
- Analyzed the impact of silver circulation on local cultural history

TEACHING EXPERIENCE

Teaching Assistant, Mathematical Foundations of Computer Science   2021, 2022
Computer Science Department, Northwestern University

Teaching Assistant, Online Markets   2022
Computer Science Department, Northwestern University

TEACHING EXPERIENCE	**Teaching Assistant, International Trade Theory** *Economics Department*, *William & Mary*	Sept 2019 – May 2020
	Teaching Assistant, Elementary Japanese *Japanese Studies Department*, *William & Mary*	Sept 2018 – May 2020
	Teaching Assistant, Computing for the Humanities *Computer Science Department*, *William & Mary*	May 2019
	Teaching Assistant, Intermediate Macroeconomics *Economics Department*, *William & Mary*	Aug – Dec 2017

WORK EXPERIENCE

Technology Analyst Intern　　　　　　　　　　　　June – Aug 2019
Deutsche Bank, *Cary, NC*

- Researched and produced an on-line dashboard that analyzes twitter texts containing cashtags using natural language processing and machine learning
- Examined the relationship between calculated sentiments and stock market closing prices
- Analyzed ag-grid code and assisted with client-side debugging using Java aTwitterlarJS

Public Policy and Strategic Planning Intern　　　　May – Aug 2017
Cesar Chavez Public Charter School, *Washington, D.C.*

- Researched and presented recommendations to the school board on communication-tracking software and platforms for the promotion of the organization
- Managed and reduced 200+ duplicated addresses in the subscriber lists using R-Studio

AWARDS / HONORS

Phi Beta Kappa　　　　　　　　　　　　　　　　　　2019
Awarded to the students in the top 5% of the graduating class.

Carl A. Fehr Scholarship　　　　　　　　　　　2017 – 2019
Awarded annually to a student chosen by the Choir director.

James Monroe Scholar Summer Research Grant　　　　2017

Dean's List　　　　　　　　　　　　　　　　　2016 – 2020

TECHNICAL SKILLS

Programming Languages: Python, Java, C, C++, Git, Clojure, LaTeX, Haskell
Web Development: XML, HTML, CSS, JavaScript, TypeScript, AngularJS
Software: Android Studio, RStudio, MATonlinetelliJ IDEA, Stata
Languages: Chinese (native), Japanese (10 years), Middle Egyptian (1 year)

Extra-curricular / Volunteer Activities	William & Mary Choir	Sept 2017 – May 2020
	Cello Performance	Sept 2017 – Present
	Women's Choir	Sept 2016 – May 2017
	Project Pheonix	Sept 2016 – May 2017
	Piano Performance	Jan 2003 – Present