

Shengchao(Danny) Hu

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🌐 <https://github.com/shengchaohu>

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SUMMARY

- Solid Maths/CS background: *Abstract algebra, Real analysis and measure theory, Functional analysis, Probability theory and mathematical statistics, Linear algebra, Econometric, Game theory, Machine learning, Algorithms, Database*
- Ongoing: Machine learning, Advanced natural language processing, Time series and stochastic process
- Programming language interest. Learning with C++ Standards Committee member Michael Spertus
- Strong interest of intellectual inquiry in different subjects, with practical research project experience

EDUCATION

University of Chicago

MS in Computer Science (data science track)

Chicago, IL

Dec 2019(expected)

Fudan University

BL in International Politics (GPA: 3.6/4.0), Minor in Accounting

Shanghai, China

June 2018

University of Oslo

Exchange program with full scholarship (1 of 8 students selected in China)

Oslo, Norway

Jan 2015–Jan 2016

PROJECTS & PROGRAMMING LANGUAGES

- Written Board game (minmax strategy), gluttonous Snake, arbitrary-precision arithmetic, preprocessing for THE MNIST DATABASE of handwritten digits in C on linux/MacOS. gdb/valgrind used
- Written a thread Pool and a thread-safe stack in C++
- Established party secretary database in MySQL (<https://mpcs53001.cs.uchicago.edu/~shengchao/SemiFinal.html>)
- Other Languages: Python (Numpy), Stata, PHP, HTML/CSS. Also refer to github url at the top

ACADEMIC EXPERIENCE

Seminar on computational geometry and metric embedding (PhD level)

Jan - Mar 2019

- Based on functional analysis (L_p & ℓ_p space) and convex optimization. 7 Maths/CS PhD participated
- Designed a $O(\log n)$ algorithm for determining if given disks cover a coordinate-parallel rectangle
- Designed a $3/2$ approximation algorithm for Minimum Multicut with given k terminal pairs (problem raised in distributed systems)
- Designed a $O(\log n)$ approximation algorithm for Capacitated Vehicle Routing Problem (extension of VRP problem with wide industry applications)
- Adviser: Prof Yuri Makarychev (Toyota Technological Institute at Chicago)

Fudan Xiyuan Undergraduate Research Program

Apr 2016 – Apr 2018

- Research project: *Promotion pattern of prefecture city party secretaries in China: 2000-2010*
- A data mining project establishing database and studying the promotion path of more than 1000 officers using data online from 2000-2010. By splitting one officer's position sequence of his political career into n -fragment and then ran the regression, I obtained very good fit to the data.

INTERNSHIP EXPERIENCE

Lansen Pharmaceutical Holdings Limited (HK listing company, 00503)

June – Sep 2017

- Marketing, business strategy and marketing intelligence
- Collected industry data online and from CICC (a consulting company in China). By using coefficients of variation method to determine weights of company parameter, giving evaluation reference of company's development goal. Referring to analysis, the management team adjusted the channel strategy.

OTHER EXPERIENCE AND INTERESTS

- TA for "Contemporary Western Economic Schools", Fudan University, Sep -Dec 2016
- Chinese National Mathematical Contest in Modeling (Third Place, 2015): *Taxi market resources distribution (by using Voronoi diagram and Dijkstra's algorithm)*