

# Jiale Chen

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EDUCATION	<b>School of Electronics Engineering and Computer Science (EECS), Peking University</b> , Beijing, China		
	<i>Major in Computer Science and Technology</i> Sep 2018 – Jun 2022(expected)		
	Turing Class - an elite class founded by Prof. John E. Hopcroft; 60 students selected		
	Major GPA: 3.94/4.0 Overall GPA: 3.90/4.0 (top 1%)		
	<b>National School of Development (NSD), Peking University</b> , Beijing, China		
	<i>Double-major in Economics</i> Sep 2020 – Jun 2022(expected)		
SKILLS	<b>Programming</b> C/C++, Python, L <sup>A</sup> T <sub>E</sub> X		
CORE CURRICULA	<b>Curriculum</b>		<b>Score</b>
	Mathematical Analysis I, II, III		96.5 in average
	Advanced Algebra I, II		93 in average
	Discrete Mathematics and Structures I, II		99.25 in average
	Algebraic Structure and Combinatorial Mathematics		96
	Mathematical Foundations for the Information Age		98
	Probability Theory and Statistics		97
	Introduction to the Theory of Computation		98.5
	Machine Learning		95
	Algorithm Design and Analysis(Honor Track)		95
	Selected Topics in Social Computing		99
	Data Structure and Algorithms(A)(Honor Track)		97
	Principles of Economics		91.5
	Intermediate Microeconomics		97
	Intermediate Macroeconomics		91
RESEARCH INTERESTS	Theoretical Computer Science and especially the topics that lie in the intersection with Economics Data Structures and Algorithms		
MANUSCRIPTS	<b>CONFERENCES (UNDER REVIEW)</b>		
	<b>MicroscopeSketch: Accurate Sliding Estimation Using AdaptiveZooming</b> Zheng Zhong*, <b>Jiale Chen*</b> , Shiqi Jiang, Yutong Hu, Tong Yang, Steve Uhlig submitted to 27th SIGKDD Conference on Knowledge Discovery and Data Mining ( <i>SIGKDD 2021</i> ). (*:Equal Contribution)		
	<b>Equal Affection or Random Selection: the Quality of Subjective Feedback from a Group Perspective</b> <b>Jiale Chen</b> , Yuqing Kong, Yuxuan Lu submitted to Thirty-Fifth Conference on Neural Information Processing Systems ( <i>NeurIPS 2021</i> ).		
RESEARCH EXPERIENCE (BY TOPIC)	<b>Information Elicitation</b>		
	<i>Group-level informativeness evaluation through reported choices and predictions</i> Advisor: Dr. Yuqing Kong		Oct 2020-Feb 2021 Peking University
	<ul style="list-style-type: none"><li>Collaboratively developed a new metric called <math>f</math>-variety to evaluate a group of people's informativeness in subjective questions, using self-reported choices and predictions of other people's choices.</li><li>Showed that <math>f</math>-variety outperforms the baseline metric (the unbalance of choices) in two case studies.</li><li>Responsible for designing survey questions and proposing the appropriate model of uninformative people.</li><li>Contributed a first-authored paper that has been submitted to <b>NeurIPS 2021</b>.</li></ul>		
	<b>Data Structures and Algorithms in Network</b>		
	<i>An algorithmic framework for estimating data streams in sliding window models</i> Advisor: Prof. Tong Yang		Mar 2020-Feb 2021 Peking University
	<ul style="list-style-type: none"><li>Collaboratively developed an algorithmic framework, MicroscopeSketch, which can adapt fixed-window algorithms to sliding windows using the two-dimensional quantization and adaptive zooming method.</li><li>Responsible for constructing the first version of the algorithm, idea refinement, and the entire experimental work.</li></ul>		

- Performed extensive algorithm refinement and showed that the developed algorithm outperforms the state-of-the-art on three tasks in both accuracy and speed.
- Contributed a first-authored paper that has been submitted to **SIGKDD 2021**.

*An algorithmic framework for tasks in hopping windows*

Mar 2020-Jun 2020

Advisor: Prof. Tong Yang

Peking University

- Collaboratively developed a generic and near-optimal framework that can adapt fixed-window algorithms to time-based and count-based hopping windows for basic tasks, using hopping timestamps and local cleaning to clean outdated items.
- Responsible for the theoretical validation of the algorithm's additional error as a framework and completed a comprehensive mathematical proof of the error bound brought by hopping timestamps and local cleaning, respectively.
- Explained that our algorithm saves space at a small cost using my theoretical proof.
- Contributed a co-authored paper.

## TALKS

**Equal Affection or Random Selection: the Quality of Subjective Feedback from a Group Perspective**

*Peking University, CS Peer Talk*

Mar 2021

## AWARDS & SCHOLARSHIPS

ICPC Regional Contest Gold Medal

2018, 2019

4 Gold Medals (rank 1, 1, 3, 8)

Pacemaker to Merit Student, Peking University

2019

Top 2.5% in Peking University, awarded to one student in each class

POSCO Scholarship for Asian Universities

2019, 2020

Top 2.5% in Peking University, awarded to at most one student in each class

Merit Student, Peking University

2020

Top 5% in Peking University

May 4th Scholarship, Peking University

2020

Highest award possible for students, more selective than National Scholarship.

Top 0.5% in Peking University, Top 1/60 in Turing Class