

Statement of Academic Purpose

Renjie Zhong

My current **career goal** is to become an economic theorist and produce impactful research combining the elegance of theory with relevant practical applications.

Motivation. Masahiko Aoki's *Toward a Comparative Institutional Analysis* profoundly motivates my focus. Aoki's use of mechanism design to analyze institutions' evolution and complementarities revealed the power of game theory to rigorously explore human configurations. Inspired by Aoki, Avner Greif and Peyton Young, I want to integrate economic theory with insights from philosophy and politics, addressing broader and deeper questions.

Preparation: PPE + Math. My major is PPE (Politics, Philosophy, and Economics). I believe that the broader perspective of a PPE education offers unique insights to economic theory. Beyond my curriculum, I pursued mathematics courses aligned with microeconomic theory, including *Measure Theory*, *Topology*, *Functional Analysis*, *Topics in Microeconomics*. I consistently earned grades of A- or higher for all these courses, even with over 30 credits per semester. During my 2024-2025 visit to Berkeley, I am further strengthening my foundation by enrolling in two Math PhD field courses (*Functional Analysis*, *Descriptive Set Theory*) and one Econ PhD course (*Economic Theory*).

Preparation: Research & TA Training. I have received rigorous training in economic theory. Since 2022, I have been an active participant in the [Theory Reading Group](#) at Renmin. Additionally, I have served as a [Teaching Assistant](#) for Bin Miao, Zijia Wang, and Zhonghong Kuang. At Berkeley, I presented my work at Theory Lunch under the guidance of Shachar Kariv and actively participate in a reading group hosted by Quitzé Valenzuela-Stookey, presenting two papers in Fall 2024. I have benefited from discussions with Shachar Kariv, Chris Shannon, and Quitzé Valenzuela-Stookey, which have refined my understanding of theory.

I have been advised by Wei Zhao since 2023. We are coauthoring the project [Selling Training Data](#). This work characterizes revenue-maximizing policies for data brokers to design and price supplemental datasets to buyers with private baseline datasets. Private datasets influence the evaluation of supplemental datasets by altering outside options and how these datasets are merged in decision-making. This problem reduces to a *multi-dimensional screening problem* with *obedience constraints* and *double deviations*. These constraints simplify the menu by imposing rigidity. In this framework, we can re-interpret and extend Bergemann, Bonatti and Smolin (2018). My independent work, *Optimal Data Procurement with Tests*, addresses how to design procurement mechanisms with inspection when data buyers possess baseline datasets to verify the purchased datasets. The goal is to minimize transfers subject to eliciting truthful reporting by data collectors.

These experiences have equipped me with a solid understanding of the literature in information design and multidimensional screening. I have learned how to refine research questions, construct relevant setup, interpret results, generalize benchmark results, and effectively write papers.

Preparation: Seminars & Conferences. I have presented my work, [Selling Training Data](#), at Berkeley, [Stony Brook International Conference](#), [CCER Summer Institute](#), [GAMES](#), and [Fudan](#). Discussions with researchers enhanced my ability to communicate clearly and integrate feedback.

Research Agenda. My current projects contribute to information design and mechanism

design, specifically in *utilizing information structures as screening instruments* when *information structure is the private type*. In future work, I aim to generalize the methodological insights in my current projects to explore a foundational framework in this field.

Beyond this, my research interests can be organized into two branches: (1) organization structure design, (2) culture and mechanism design. I also have broad interests in economic theory, including model misspecification, statistical inference in games, and testing the performance of economic models.