

# Tingyu Dai

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## EDUCATION

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### Columbia University (CU)

New York, NY

Master of Arts, Sociology

Sept. 2024–Feb. 2026

- GPA: 4.00/4.00
- Relevant courses: Statistical Theory and Causal Inference (Dept. of Political Science); Social Network Analysis; Migration, Globalization, and Education; Reckoning with Asian Americans; New Directions in Economic Sociology (Algorithmic Management: Organizational & Societal Effects).

### Peking University (PKU)

Beijing, China

Bachelor of Arts, Philosophy

Sept. 2018–Jun. 2023

- GPA: 3.63/4.00

## RESEARCH INTERESTS

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labor market and occupation; mobility; inequality; economic sociology; causal inference; computational social science

## SKILLS & LANGUAGES

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- **Computational & Quantitative Methods:** causal inference, statistical modeling and model diagnostics, social network analysis, LLM-assisted measurement and content analysis, large-scale data collection (including web scraping).
- **Qualitative Methods:** in-depth interviewing, ethnographic observation, mixed-methods research design, literature synthesis.
- **Tools:** Python, R.
- **Languages:** English (Proficient), Mandarin (Native).

## RESEARCH EXPERIENCE

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### Computational Media and Politics Lab (COMAP), Northwestern University

Evanston, IL

PI: Prof. Yingdan Lu | Research Assistant

Feb. 2026–Present

- **Sociopolitical LLM Benchmarking:** Compiled and structured 7 large-scale cross-national surveys to support the development of a Global LLM Values Benchmarking framework (Buffett Institute, Northwestern); applied thematic classification of 167 survey questions to scaffold structured benchmarking across geopolitical and cultural dimensions.
- **Causal Inference in Visual Political Communication:** Applied LLM-assisted feature discovery to identify confounders in observational image research on politicians' social media self-personalization; conducted 300 hand-coded annotations as ground-truth labels; formalized confounder selection via Double LASSO to strengthen causal identification.
- **International Propaganda:** Contributed to research design for a study on China's international propaganda on YouTube; developed and iteratively revised a structured codebook for content classification; conducted human coding on an initial dataset of 200 videos as a ground-truth baseline; trained and calibrated additional RA coders to ensure intercoder reliability.

### Columbia University (CU)

New York, NY

Thesis Advisor: Prof. David Stark | Graduate Researcher

### Sponsored by Metrics: How Platforms Organize Immigrants into an Industry (Master Thesis) Sept. 2024–Feb. 2026

- Examines how platforms organize immigrant aggregation into co-ethnic labor markets through metric-based coordination. Built an original cross-platform dataset of 50 vertical-drama projects and 300+ practitioners via scraping of ReelShort, IMDb, and LinkedIn.
- Constructed a practitioner collaboration network in Python; analyzed structural features including clustering, role distribution, and network cohesion to examine early-stage industry formation.
- Triangulated 10 in-depth interviews and one year of field observation with platform-generated quantitative metrics.

### Segregations as Barriers to Upward Mobility (Course Project)

Oct. 2024–Dec. 2024

- Applied multiple linear regression in R to county-level Opportunity Insights data; conducted multicollinearity checks and model diagnostics; found racial segregation has a substantially stronger negative association with upward mobility than income segregation.