Sasha Petrov

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Professional Summary

Quantitative economist specializing in spatial economic modeling and computational analysis with expertise in international trade and political economy. Proven track record of designing analytical frameworks for complex economic phenomena using econometric modeling and causal inference. Experienced in managing independent research projects and communicating technical findings to diverse stakeholders.

Education

University of Chicago — Chicago, IL
Ph.D. in Economics — *2019 — 2025*
- Primary Fields: International Trade, Political Economy
- Secondary Fields: Computational Economics, Development Economics
- Advisors: Jonathan I. Dingel, James Robinson, Stéphane Bonhomme, Esteban Rossi-Hansberg
- Relevant coursework: Econometrics, Applied Microeconometrics, Industrial Organization, Machine Learning and Econometrics, Real Analysis, Linear Algebra, Differential Equations, Operations Research, Auctions

New Economic School — Moscow, Russia
M.A. Economics — *2017 — 2019*

Lomonosov Moscow State University — Moscow, Russia
M.A. Economics — *2015 — 2017*

Lomonosov Moscow State University — Moscow, Russia
Bachelor of Economics — *2011 — 2015*

Work Experience

Teaching Assistant — 2022 — 2024
University of Chicago — *Chicago, IL*
- Led discussion sections and office hours for graduate and undergraduate Econometrics, and undergraduate International Trade
- Managed course logistics and grading systems focusing on transparency and fairness

Research Analyst — 2018 — 2019
New Economic School — *Moscow, Russia*
- Managed data collection, cleaning, and analysis workflows for datasets
- Collaborated with senior researchers on methodological approach and interpretation of findings
- Implemented an optimization algorithm in Python for an economic application of the Max-k-Cut problem
- Prepared technical reports and presentations summarizing research outcomes

Research Analyst — 2017 — 2017
Lomonosov Moscow State University — *Moscow, Russia*
- Supported data analysis for socioeconomic indicators in developing countries at the sub-national level using R
- Maintained research databases
- Assisted in preparing research outputs and documentation

Key Projects

Economic Optimization Framework for National Borders in Africa (***Job Market Paper***)
- Developed novel spatial optimization framework to analyze economic efficiency of configurations of national borders
- Processed and analyzed geospatial datasets for Africa
- Implemented complex optimization algorithms to solve large-scale mixed-integer non-linear problems

Effects of Jurisdictional Border Configurations on Trade Costs: Russian Empire Case Study

- Analyzed impact of jurisdictional boundary design on economic specialization patterns using 19th-century administrative data, adapting a Diff-in-Diff strategy and tests for multinomial distributions
- Developed novel identification strategy leveraging ethnic group specialization, using a discrete choice framework and a trade model
- Processed and standardized Russian Imperial Census data covering multiple ethnic groups across Caucasus and Central Asia regions

Awards & Recognition

- The Pearson Institute Research and Innovation Fund ($5,800) — 2024
- Urban Doctoral Fellow at Mansueto Institute, University of Chicago — 2023-2024
- University of Chicago Data Acquisition Grant ($3,000) — 2023
- Financial group “Future” full tuition grant and scholarship — 2018-2019
- NES Alumni scholarship — 2018

Leadership & Service

Graduate Student Representative 2022 — 2024

- Represented PhD student cohort in departmental meetings and policy discussions
- Advocated for improved working conditions and transparent academic processes
- Organized smaller group meetings to develop actionable proposals for departmental improvements

Peer Mentor Program 2022 — 2023

- Provided guidance and support to incoming graduate students

Skills

- **Programming Languages**: Julia, R, Python, MATLAB, LaTeX, Stata
- **Statistical & Computational**: Econometric modeling, Spatial analysis, Optimization algorithms, Causal inference, Machine learning
- **Specialized Tools**: GAMS, AMPL, GIS software, Git, Bash
- **Data Management**: Large dataset processing, Geospatial data analysis, Statistical computing, Database management
- **Languages**: Russian (native), English (fluent), Spanish (intermediate), Italian (intermediate), German (basic), French (basic)

Legal name: Alexander Petrov