

# Kory Rosen

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## EDUCATION

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**Grinnell College**, Grinnell, Iowa  
Bachelors of Arts in Computer Science and Political Science  
Concentration in Statistics

August 2020 — May 2024  
Cumulative GPA: 3.64/4.00

**University of Sydney**, Sydney, Australia  
Study Abroad Program

February 2023 — June 2023

## RESEARCH INTERESTS

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- Investigating the integration of Artificial Intelligence (AI) within legal systems and frameworks.
- Innovating AI tools for legal decision-making, upholding ethical and human rights standards.
- Examining AI's influence on privacy, fairness, and intellectual property in legal contexts.
- Enhancing the accessibility and efficiency of legal services through AI.
- Engineering reproducible AI models for practical legal applications.
- Conducting interdisciplinary research across AI, law, and social sciences to explore AI's societal impacts.

## RESEARCH EXPERIENCE

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**Purdue University**  
*Political Science Undergraduate Research Assistant*

Remote  
June 2023 — January 2024

- Engages in a cutting-edge research project under Professors Daniel Schiff and Kaylyn Jackson Schiff, utilizing Large Language Models (LLMs) for analyzing sociopolitical behavior.
- Orchestrates comprehensive evaluations of LLM architectures, improving response accuracy and capability in identifying demographic-specific phrases.
- Develops innovative prompts for demographic analysis, integrating linguistic skills with AI technology.
- Analyzes LLM performance in discerning key phrases from open-ended survey responses.
- Employs natural language processing techniques for processing and analyzing large datasets to reveal connections between language use and demographic factors.

**University of North Texas**  
*Research Assistant*

Denton, Texas (Initially) / Remote (Currently)  
May 2022 — Present

- Collaborate under the guidance of Professor Ting Xiao and Dr. Daniel Lersch on a deep learning project focused on variational autoencoders for particle identification in high-energy physics, a role stemming from my involvement in the Summer 2022 Research Experience for Undergraduates (REU) program
- Engineering and deploying custom hyperparameter tuners, aiding in the development and refinement of predictive models.
- Assisting in the progressive enhancement of model architecture, contributing significantly to its computational efficiency and predictive accuracy.
- Presented a related poster at the REU symposium and currently engaged in drafting a research paper for publication

## PUBLICATIONS

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**Journal Paper**  
In Progress

- Ravi Bevara Varma Kumar, Sean Dobbs, Daniel Lersch, Kory Rosen, Tyler Viducic, Ting Xiao. A Generative Particle Identification Algorithm for the GlueX Experiment.

## SELECTED COURSES

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- Automata, Formal Languages, and Computational Complexity
- Introduction to Artificial Intelligence (Advanced) [University of Sydney]
- Operating Systems and Parallel Algorithms
- Analysis of Algorithms
- Big Data and Data Diversity (Advanced) [University of Sydney]
- Advanced Seminar in Constitutional Law [Spring 2024]
- Constitutional Law and Politics
- Advanced Seminar on the U.S. Foreign Policymaking Process
- Bayesian Statistics
- Object-Oriented Problem Solving, Data Structures, and Algorithms
- Making Policy in Political Context [University of Sydney]
- Introduction to Data Science

## ACADEMIC EXPERIENCE

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### Department of Mathematics and Statistics, Grinnell College

Grinnell, Iowa

Mentor, STA-230

August 2023 — December 2023

- Guided students in bi-weekly class sessions on R programming and data analysis, significantly enhancing their comprehension and encouraging active participation.
- Led weekly mentor sessions, explaining course concepts and assisting with queries regarding homework and class material.
- Managed communications efficiently, promptly responding to emails from students and professors to clarify course materials.

Grader, STA-230

August 2022 — December 2022

- Participated in regular grading meetings to discuss and evaluate a cohort of 50 students, maintaining high grading standards.
- Consulted with the course instructor on grading approaches for ambiguous cases, achieving a fair assessment of complex solutions.
- Delivered insightful feedback on assignments, focusing on areas of improvement and mastery of key concepts for enhanced student learning.

### Department of Computer Science, Grinnell College

Grinnell, Iowa

Grader, CSC-151

October 2021 — May 2022

- Assisted in grading introductory computer science projects and homework, focusing on programming fundamentals.
- Participated in weekly grading sessions, where there was a focus on the consistent and fair evaluation of 30 students' coding assignments each week.
- Coordinated with the professor to develop effective grading methodologies for programming assignments and projects.

## UNIVERSITY SERVICE

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### Information Technology Services, Grinnell College

Grinnell, Iowa

Services Desk Technical Assistant

September 2021 — Present

- Provide technical assistance for software and hardware issues to the College Community.
- Troubleshoot an average of 35 problems per week in real-time, serving campus constituents, clients, and users.
- Create, maintain, and manage a log of incidents and requests using ServiceNow, ensuring precise documentation and follow-up.

## SKILLS

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- **Programming:** Python (including Pandas, Numpy, Scikit, TensorFlow), Java, C (including CUDA), Scheme (particularly Racket), R (including RShiny and tidyverse), HTML, CSS, LaTeX, PostgreSQL, SQLite, NoSQL, MongoDB, PostGIS
- **Software:** Microsoft Office Suite, Minitab, Stata, Linux, Windows, MacOS
- **Languages:** English, Spanish
- **Soft Skills:** Analytical, Critical Thinker, Collaborative, Leader, Innovative, Detail-Oriented, Motivated, Problem Solver, Ethical, Results-Driven

## PROJECTS

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### Major League Baseball Over the Years [↗](#) *Project Code*

Grinnell, Iowa  
October 2021

- Led a collaborative initiative to create an R Shiny application showcasing the evolution of Major League Baseball statistics over time.
- Mastered server-interface communication in R, contributing over 450 lines of code to facilitate dynamic data visualization and user interaction.
- Implemented advanced data analysis techniques to provide in-depth insights into extensive baseball statistics, catering to a diverse audience.

## ADDITIONAL EXPERIENCES

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### World Trade Center Northern California *Program Participant, Global Connections Leadership Program*

Remote  
July 2020 — August 2020

- Completed an intensive 4-week program, honing diplomatic skills and leadership acumen in an international context.
- Interacted with international leaders and experts from the International Visitor Leadership Program, broadening diplomatic skills and enhancing global and cultural awareness.
- Developed public speaking and leadership competencies, conducted research, and refined writing skills specific to international relations.
- Networked extensively, establishing connections with professionals and peers from diverse cultural, political, and economic backgrounds.
- Participated in critical discussions on global challenges, including climate change, global health initiatives, gender equity, and pandemic response.