JUNCHENG (VINCENT) LIU

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EDUCATION

University of Chicago Harris School of Public Policy   Chicago, Illinois
Master of Science in Computational Analysis and Public Policy   *June 2023*
Relevant Coursework:

- Data Visualizations for Public Policy   Data Science Clinic
- AI Applications in Social Science   Program Evaluations (Experiment and econometrics in R)
- Survey Questionnaire Design   Strategies to Interview Hard to Penetrate Community
- Criminal Procedure Law II: From Bail to Jail   Applied Policy Communication Lab

University of Minnesota Twin Cities   Minneapolis, Minnesota
Bachelor of Arts in Statistical Practice   *May 2021*
Bachelor of Science in Sociology of Law, Criminology, and Deviance   Membership: Phi Beta Kappa
Minor in Political Science
DirecTrack to Teaching, English as a Second Language (ESL) Teaching Track   Dean's list: Fall 2017 - Spring 2021
Relevant Coursework:

- Juvenile Delinquency   Applied Statistics

CORE COMPETENCIES

- Software: R, Python, Git and GitHub, Postgresql, Sqlite, html, javascript, d3, Quarto, Stata, Tableau
- Technical: Data visualization and cleaning, geospatial mapping, machine learning, natural language processing
- Communication: Policy, data, and technical writing, storytelling, interviewing, project management (Agile)
- Language: English (full professional competency), Mandarin (native or bilingual)

WORK EXPERIENCE

Data Science Clinic   Chicago, IL
Community Data Fellow (Client: New Community Outreach)   *March 2023- June 2023*

- Evaluated the nonprofit's Knowledge Empowers Youth (KEY) program about school-based restorative justice by analyzing surveys and constructing 5+ data visualization to visually show students' responses on Likert-scale and open-ended questions
- Redeveloped the Beginning of Program and End of Program surveys to enhance survey logic, use plain and simple language and active voice in question stems and options, and better capture the effectiveness of KEY program on at-risk students

U Chicago Justice Project, Department of Sociology   Chicago, IL
Research Assistant   *October 2022 – June 2023*

- Developed 20+ journalism-style data visualizations and tables using R ggplot and gt packages to show publication biases in policing and violence prevention papers by grantors like National Institute of Justice and Arnold Ventures
- Created 5+ annotated line charts, shaded line charts, and stacked bar charts to depict changes in city government expenditures on police departments during times of financial difficulties measured by high debt per expenditure ratio
- Conducted quality checks in Python to find out patterns of name matching failures in the police employee database

Urban Institute   Hybrid (Remote and Washington, DC)
Data Science and Policy Intern at Center on Nonprofits and Philanthropy (CNP)   *June 2022 – August 2022*

- Transformed the Nonprofit Sector In Brief paper to a R Shiny portal and a R flex dashboard using the NCCS database and IRS-Business Master File data to communicate stories about development of the US nonprofit sector via interactive visualizations
- Created 10+ helper functions to optimize data scraping, data cleaning, and visualization processes and reduce the time

Crown School of Social Works   Chicago, IL
Research Assistant, the Smart Decarceration Initiative   *February 2022 – June 2022*

- Organized data collection and cleaning for the CAT-MH project (System-wide Adaptive Mental Health Measurement and Risk Reduction for Probationers in Cook County, Illinois) in the Smart Decarceration Initiative
- Wrote literature review for a research paper that used interview to study teachers' racialized perceptions of justice activism

Harris School of Public Policy   Chicago, IL
Teaching Assistant for PPHA 37103: Crime Prevention   *January 2022 – March 2022*

- Supported Prof Jen Ludwig's teaching about evaluating crime-prevention programs using causal inference methods
- Graded 20 students' policy memos weekly and commented on paper contents, structures, and writing to help students improve

Juvenile Supervision Center, Department of Correction and Community Rehabilitation (DOCCR)   Hennepin County, MN

JSC Intern   *August 2019 - March 2020*
- Interviewed 9 juveniles with screening questions regarding their socioeconomic backgrounds and previous drug and alcohol consumption information to connect them to government programs and other resources
- Conducted juvenile intake with probation officers and center staff to record the time and nature of juveniles' offenses

RESEARCH PROJECTS

Illinois Unemployment Insurance User Experience

Project for Harris Policy Lab (Client: Illinois Department of Employment Security, IDES*)*   *March 2023- June 2023*
- Collaborated with the Assistant Deputy Director at Illinois Department of Employment security and agents from Department of Labor to evaluate problems in current unemployment insurance application procedure in the state
- Co-presented project findings to the clients and co-wrote a policy memo to highlight 15+ recommendations to tackle issues including high non-response rate, low accessibility, low satisfaction rates, and ineffective survey constructs

Measuring Racial Discriminations in Police Traffic Stops Project (GitHub Repo)

Project for Data Science Clinic (Client: Business and Professional People for Public Interest*)*   *September 2022 – December 2022*
- Produced a data storytelling report with 10+ publication-standard graphics made with the *Altair* package on Google Colab about traffic stops, searches for contrabands, and consent car searches using the Illinois Department of Transportation data in Python
- Developed algorithms in Python to calculate the age-adjusted probability for each racial group and drawing splines on the plots using the American Community Survey and Census data

Fostering Criminal Justice with Data Science Data Storytelling Trilogy

Independent Project (Published by Towards AI, Medium)   *October 2022*
- Analyzed the Uniform Crime Report – National Incidence-Based Reporting System data to construct data stories about who was arrested in DC in 2021 through visualizations built with ggplot and logistic regressions in R
- Implemented a whole data science/quantitative research pipeline from developing research questions to getting, cleaning, analyzing, visualizing, and modeling data to answer research questions
- Produced three reproducible research reports using R Quarto (GitHub Repo)

Police-Public Relation and Trust in Chicago Survey

Final Project for PPHA 34600: Survey Questionnaire Design   *March 2022 – June 2022*
- Developed a survey of 20 questions to measure Chicagoan's attitudes on the policing practice of Chicago Police Department officers and diverse police reform strategies under the supervision of Prof Bautista, Director of General Social Survey, NORC

A Diverging Road Ahead - An Examination of Police Power at the Street Level

Sociology Capstone Project for SOC 4994W: Independent Research   *January 2021 - May 2021*
- Studied the 2018 Police-Public Contact Survey (PPCS) data in R with weighted logistic regressions and weighted regressions to research issues of racial profiling and neighborhood-targeted policing
- Wrote a 25-page research paper with the public and researchers as the intended audience in which I synthesized 20+ sources and pondered two suggestions for police reforms emphasizing community policing and accountability

COMMUNITY INVOLVEMENT

UCLA Covid-19 Behind Bars Data Project   Virtual

Data Science Volunteer, Immigration Detention Team   *August 2020 – January 2021*
- Produced time-series plots with moving averages in R by deploying *ggplot2* package to detect changes in active COVID cases, infection cases, and death counts at over 100 ICE detention facilities to push for more cleaning supply access in facilities

Community United Against Police Brutality   Minneapolis, MN

Grassroots Organizer   *October 2018 - September 2021*
- Researched the Minneapolis Police Department body-worn camera policies and officers' fear-based training background to collect evidence of inappropriate use of force in Thurman Blevins' case
- Investigated officers' violations of department polices by scrutinizing legal statues in Minnesota and body-worn camera policies,
- Contributed to works that advocated for increasing numbers of mental counselors in MPD and enhancing officer accountability

Restorative Justice Community Action   Minneapolis, MN

Community Member   *October 2018 - September 2021*
- Offered 30+ restorative solutions to 20+ participants to facilitate offenders' reintegration into society
- Practiced a restorative justice approach focusing on individual-community relationship building to prevent recidivism and facilitate reentry as a replacement for traditional ineffective punishments, such as probation