

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

Expected June 2023

Relevant Coursework:

- Program Evaluations (Spring)
- Applied Policy Communication Lab
- Data Visualization for Public Policy
- Strategies to Interview hard to Penetrate Communities
- Policy Lab (Spring)
- Survey Questionnaire Design (A)

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

DirectTrack to Teaching, English as a Second Language (ESL) Teaching Track

Relevant Coursework:

- Criminal Justice System (A)
- Teaching as a Profession II (A)

CORE COMPETENCIES

- Software: R, STATA, Python, git, Tableau, Postgresql, Sqlite, html, javascript, d3, ggplot, plotly, leaflet, tidyverse, pandas
- Technical: Data storytelling, geospatial visualization, web scraping, statistics, machine learning, natural language processing
- Communication: Policy and technical writing, strategic planning, storytelling, project management (Agile framework)
- Language: English (full professional competency), Mandarin (native or bilingual)

WORK EXPERIENCES

U Chicago Justice Project, Department of Sociology

Chicago, IL

Research Assistant

October 2022 – Present

- Conducted quality checks in Python to find out patterns of name matching failures in the police employee database by using the *Pandas* library and produced summary tables that contain counts and examples of each type of name matching failure
- Analyzed the Census municipality police pension data in Python on Google Colab and created interactive charts using Plotly

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 using the NCCS database and IRS-BMF (Business Master File) data to embed user interactions and interactive visualizations
- Developed a flex dashboard that utilizes a storyboard design in R with 20+ interactive charts and maps to communicate stories about the US nonprofit sector in 2019 from different angles to policymakers and researchers

Skokie School District 73½ (Education Pioneer)

Hybrid (Remote and Skokie, Illinois)

Financial Liaison Intern (Education Pioneer Fellow)

June 2022 – August 2022

- Wrote a grant independently, including creatively developing a grant document, making grant rubric sheets in Excel, and brainstorming application procedures, with the goal of easing teachers' difficulties and reinforcing district priorities
- Formulated a Request for Proposal (RFP) paper with the bidding information for the district's demographic projection service
- Created a slideshow to introduce and compare different population projection methods and present it to the financial committee

Crown School of Social Works

Chicago, IL

Research Assistant, the Smart Decarceration Initiative

February 2022 – June 2022

- Coauthored a research paper that used interview to study teachers' racialized perceptions of BLM at a Chicago Public School (**The study is among the final papers considered by American Education Resource Association and will be presented in the 2023 AERA annual meeting**)
- 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)

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

RESEARCH PROJECTS

Analyzing The School Survey on Crime and Safety Data

Independent Data Blogging Project (Published by [Towards AI](#) and [LevelUp Coding](#))

December 2022-January 2023

- Cleaned and analyzed the 2007-2008 and 2017-2018 School Survey on Crime and Safety (SSOCS) data, collected by National Center for Education Statistics, in R to investigate what methods were used by 2k+ public schools to curb crimes
- Visualized data with a lollipop chart and a dumbbell dot plot to compare across categories and showcase trend via *ggplot* in R

Measuring Racial Discriminations in Police Traffic Stops Project

Project for Data Science Clinic (Client: Business and Professional People for the Public Interest, BPI)

September 2022 – Present

- Developed pipelines 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
- 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

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 data science 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

Who Was Served by Our Public Education System? Who Was Left Out?

Final Project for CI 3902: Teaching as a Profession II

January 2021 - May 2021

- Researched the criminal-educational complex in the K12 system by using the American Community Survey data to study issues of school truancy and dropout
- Analyzed school enrollment rates by race, sex, immigration status, income, and if or not being a Medicaid recipient

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 data with weighted logistic regressions and weighted regressions in R to research issues of racial profiling and neighborhood-targeted policing
- Synthesized 20+ sources including 5+ Supreme Court case rulings and pondered two suggestions for police reforms emphasizing community policing and accountability in a 25-page final report

COMMUNITY INVOLVEMENT

Justice Page Middle School (Public School)

Virtual (Google Meet)

Classroom Assistant

January 2021 – May 2021

- Facilitated 10+ in-class exercises in breakout rooms with 35+ students in a 6th grade social study class
- Tutored English writing to 10+ immigrants and English learners that possessed divergent English writing and speaking abilities

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 the killing of Mr. Thurman Blevins

Restorative Justice Community Action

Minneapolis, MN

Community Member

October 2018 - September 2021

- Offered 30+ restorative solutions to 20+ participants to facilitate offenders' reentry into society
- Practiced a restorative justice approach focused on family/community relationship building to tackle crimes and recidivism as alternatives for traditional punishment, such as probation and imprisonment

Roosevelt High School (Public School)

Minneapolis, MN

Classroom Assistant

September 2019 - December 2019

- Supported 3 teachers in one 9th grade EL (English Language) and one 9th grade Algebra classes
- Graded 30+ students' vocabulary homework and tutored 10 students high-school algebra and geometry