

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:

- CAPP 30122: Computer Science with Applications II
- PPHA 36620: Applied Policy Communication Lab
- CAPP 30239 Data Visualization for Public Policy
- CAPP 30235: Databases for Public Policy
- PPHA 34600: Survey Questionnaire Design (A)
- MACS 31900: AI Applications in Social Science (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

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

Relevant Coursework:

- SOC 4162: Criminal Procedure (A)
- CI 3901: Teaching as a Profession I (A)
- SOC 4141: Juvenile Delinquency (A)
- CI 3902: Teaching as a Profession II (A)

CORE COMPETENCIES

- Technical: R, STATA, Python, git, Tableau, SQL, natural language processing, machine learning, html, javascript, d3
- Technical: Data cleaning (*Tidyverse*, *Pandas*), data and geospatial visualization (static and interactive), statistics analysis
- Language: English (fluent), Mandarin (native)
- Others: Policy and technical writing, strategic communications, storytelling

INTERNSHIP EXPERIENCE

Urban Institute

Hybrid (Remote and Washington, DC)

Data Science and Policy Intern at Center on Nonprofits and Philanthropy (CNP)

June 2022 – August 2022

- Developed a R Shiny data portal based on the Nonprofit Sector in Brief report using NCCS database and IRS-BMF (Business Master File) data to embed user interactions, user flexibility, and interactive storytelling
- Developed a flex dashboard that utilizes a storyboard design in R with 20+ interactive charts and maps to develop stories about the development of the US nonprofit sector in a decade and in 2019
- Created 10+ helper functions that simplified data scraping, data cleaning, and visualization processes

Skokie School District 73½ (Education Pioneer)

Hybrid (Remote and Skokie, Illinois)

Financial Liaison Intern (Education Pioneer Fellow)

June 2022 – August 2022

- Created a grant independently, including creatively writing a grant document, making grant rubric sheets in Excel, and brainstorming application procedures, for the district to ease teachers' difficulties and reinforce district priorities
- Created a Request for Bid (RFB) paper and a slideshow for the district's enrollment projection service project to support the district's strategic making in the bidding process
- Visualized district financial data with graphs like diverging bar charts and pie charts to show annual fiscal surplus and deficit

Crown School of Social Works

Chicago, IL

Research Assistant, the Smart Decarceration Initiative

February 2022 – June 2022

- Coauthored a research paper for a qualitative project about racialized emotions among teachers at a Chicago Public School
- Supported data collection and data gathering 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
- Conducted juvenile intake with probation officers and center staff to record the time and nature of juveniles' offenses

ACADEMIC PROJECTS

Project with BPI (Business and Professional People for the Public Interest)

Project for CAPP 31300: Data Science Clinic (operated through Data Science Institute)

September 2022 – Now

- Analyzing racial discriminations in Chicago police officers' stop-and-frisk practice through regression analysis in Python
- Visualizing traffic stop information in Chicago with Python's *GeoPandas* library

Diving into New York Times News Article at Four Time Points – Through natural language processing and deep learning

Final Project for MACS 31900: AI Applications In Social Science

March 2022 – June 2022

- Scraped the New York Times news data from the NYT Archived database in Python
- Applied natural language processing algorithms to preprocess and analyze data and visualized it with word clouds and charts
- Grasped deeper understanding of data with unsupervised machine learning (K-means) and deep learning in Python
- Developed helper functions to create text preprocessing pipeline and simplify natural language tasks

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

Food in the Hood – A Cross Analysis of Food Security and Crime Level in 72 Chicago Neighborhoods

Final Group Project for CAPP 30122: Computer Science with Applications II

January 2022 – March 2022

- Utilized Python *Plotly* and *Geojson* libraries to produce a visualization report in Jupyter Notebook with 8+ interactive graphics to describe the food accessibility and crime level information of Chicago's 72 communities
- Cleaned the Chicago Data Portal data with *Pandas* and established a data cleaning pipeline

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

UCLA Covid-19 Behind Bars Data Project

Virtual

Data Science Volunteer, Immigration Detention Team

August 2020 – May 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

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
- Developed a curriculum with Minnesota Literacy Council to teach immigrants, refugees, and other English learners their legal rights in front of police officers in scenarios of home searches, traffic stops, and street encounters.

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 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 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