

Crime and Victim Risk Modeling in Cook County, Illinois

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In a Shiny app [1], the researchers display geolocated arrest records data sourced from the Chicago Police Department's (CPD) Crime and Victimization Risk Mitigation (CVRM) model [2] and the City of Chicago's open data initiative [3]. The CVRM calculates a risk score that is used by CPD to estimate the likelihood of an individual being arrested for or becoming the victim of a shooting or assault and battery in the next 18 months. A random and representative sample of 1000 observations was taken from the larger CVRM dataset ($n = 313,469$). The dataset used for the project [4] is a subset of the random sample and includes 10 out of 56 variables. The researchers use Leaflet in Shiny app to display an interactive map indicating police districts in Chicago, IL. Districts—in this case the police district [5] corresponding to the last known address of a given arrestee in the dataset—are colored in various shades of blue such that darker shades indicate more total arrests than lighter shades. The map reveals geospatial patterns of concentrated arrests which correspond with police districts where residents are more likely to be Black, to live in poverty, and/or to be unemployed relative to other districts. On the *Implications* tab of the Shiny app, the researchers discuss the importance of interrogating ostensibly neutral technologies such as those used in predictive policing. Given the history of police-perpetrated racialized violence and mass incarceration which disproportionately affects Black men in America [6], the researchers caution against the assumption that algorithmically derived policing decisions are objective.

Notes

[1] Project Repo: https://github.com/elliottcodes/INFO523_Final-Project

[2] CVRM Fact Sheet: <https://bit.ly/3EyR0Kx>

[3] Data Portal: <https://data.cityofchicago.org/>

[4] For more on methods, see the *About this Project* tab within the app

[5] Chicago Police Districts: <https://bit.ly/3I9AWkx>

[6] M. Alexander. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness* (2010)