

Fair Policing Analysis in Chicago

Winter Projects Showcase

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Presentation Overview

- The Dataset
- Analysis of Demographics
- Kaplan Meier Analysis
- Analysis of Salaries
- Analysis of Complaints
- Significance of our Project

Chicago Police Dataset

- Dataset Time Span: 1940 - 2017
- Data Features: Chicago demographics, officer profiles, years served, awards, promotions, salaries, complaints, etc.
- Dataset Obstacles: poorly named files, data unsystematically recorded over time, missing data

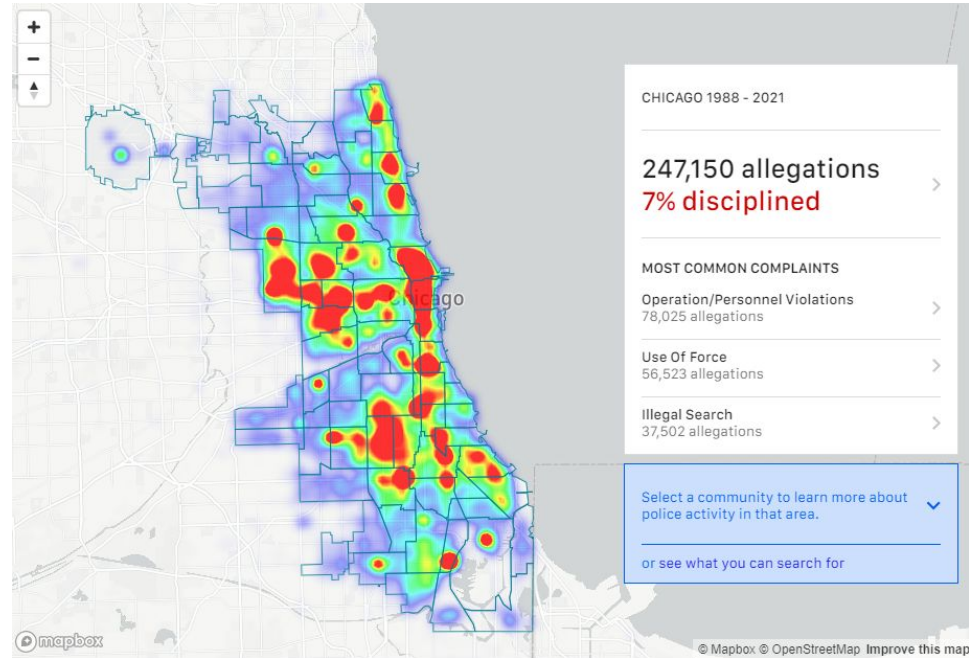


Image Source: Citizens Police Data Project

(<https://beta.cdpd.co/>)

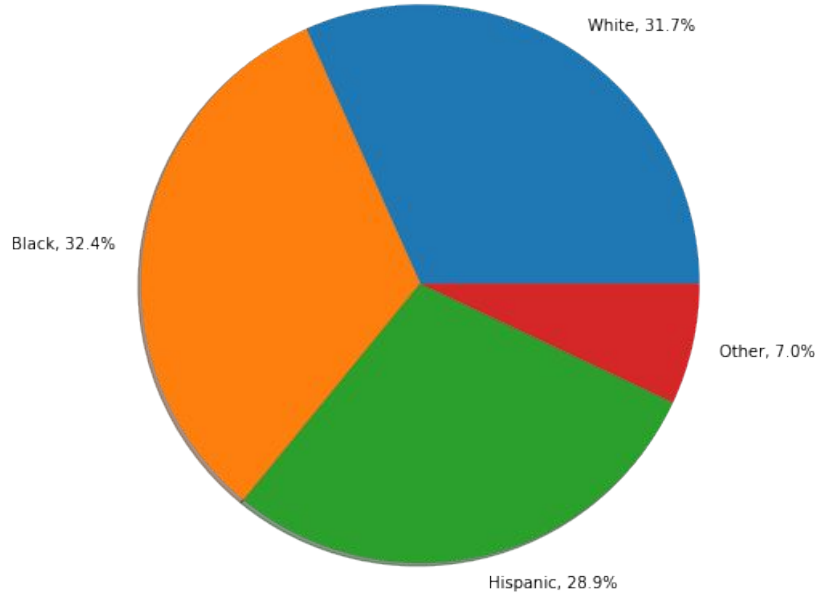
Dataset Source: Invisible Institute

(<https://github.com/invinst/chicago-police-data>)

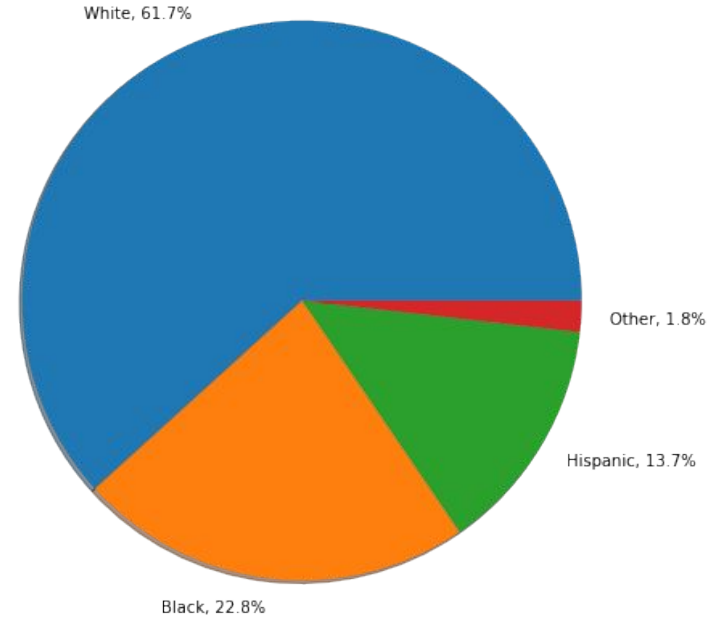
ANALYSIS OF DEMOGRAPHICS

Comparison of Chicago Population and Chicago PD Demographics

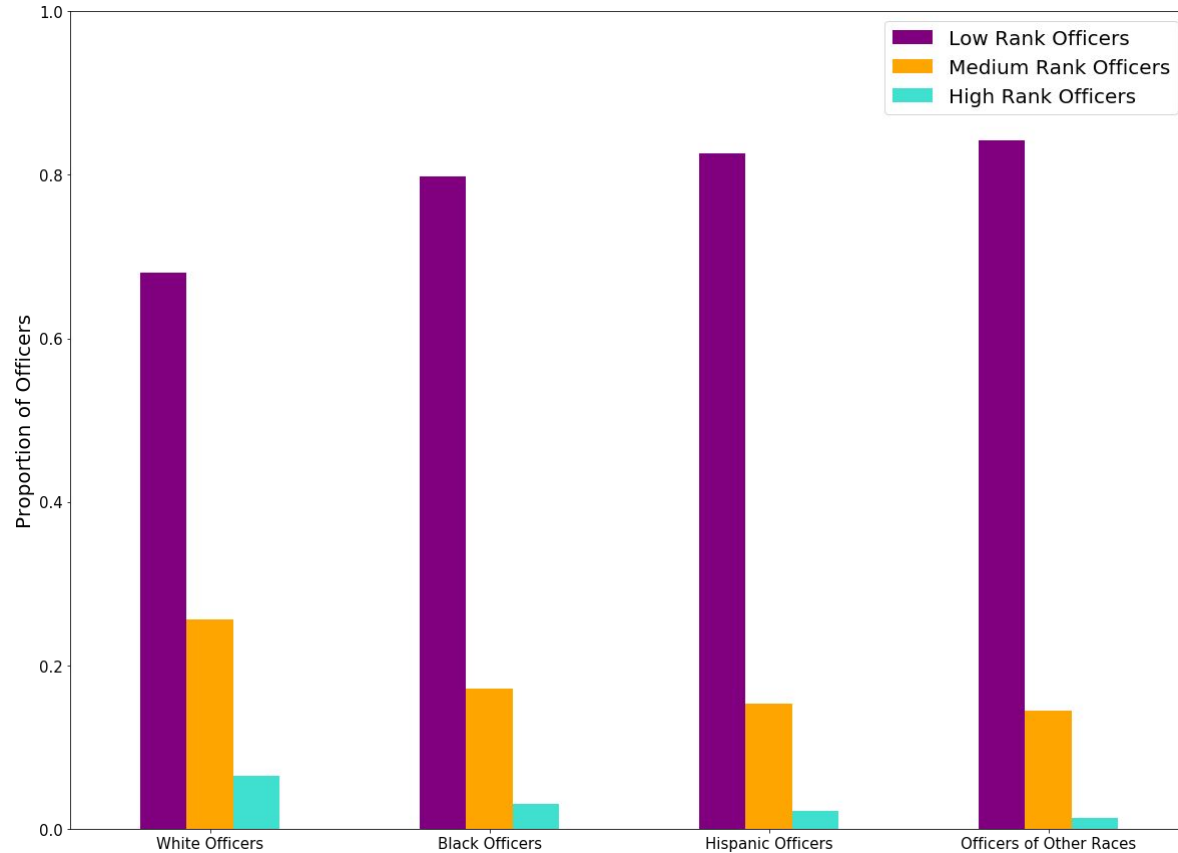
Percentage breakdown of race/ethnicity in the city of Chicago



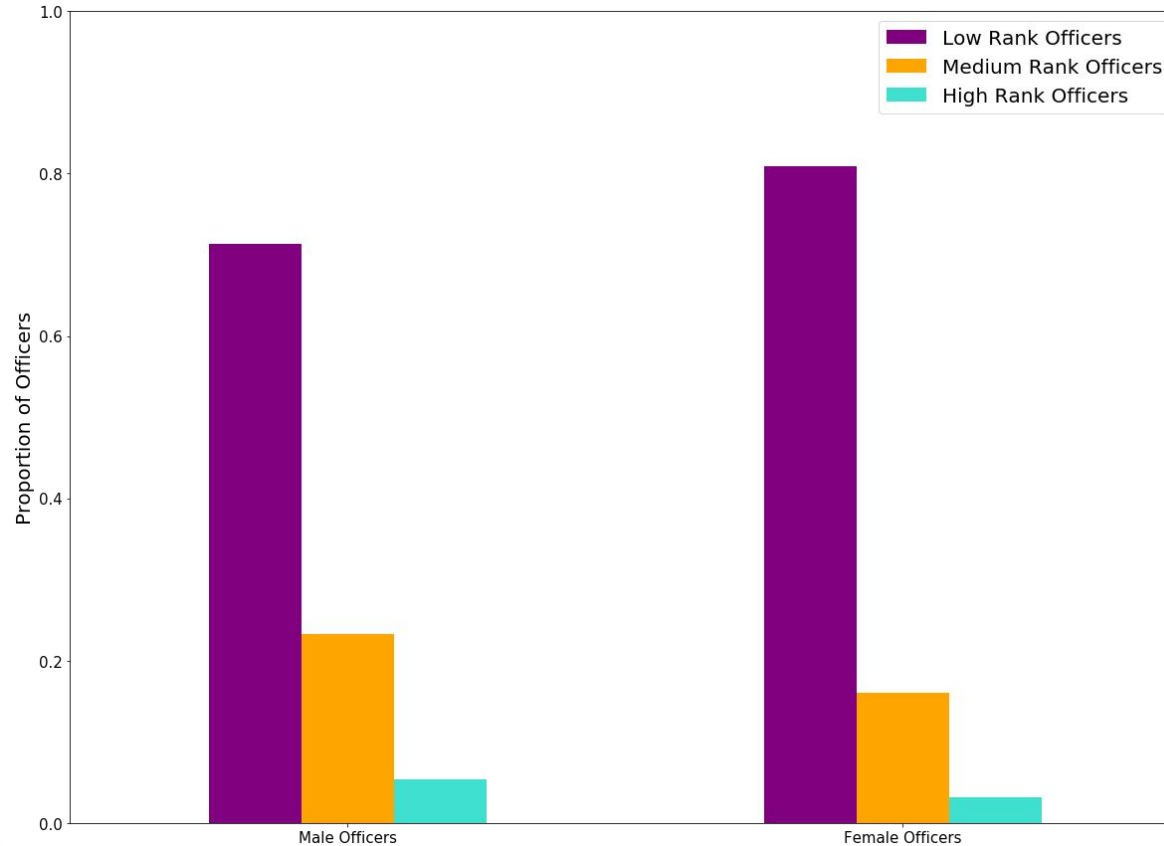
Percentage breakdown of race/ethnicity in the Chicago Police Department



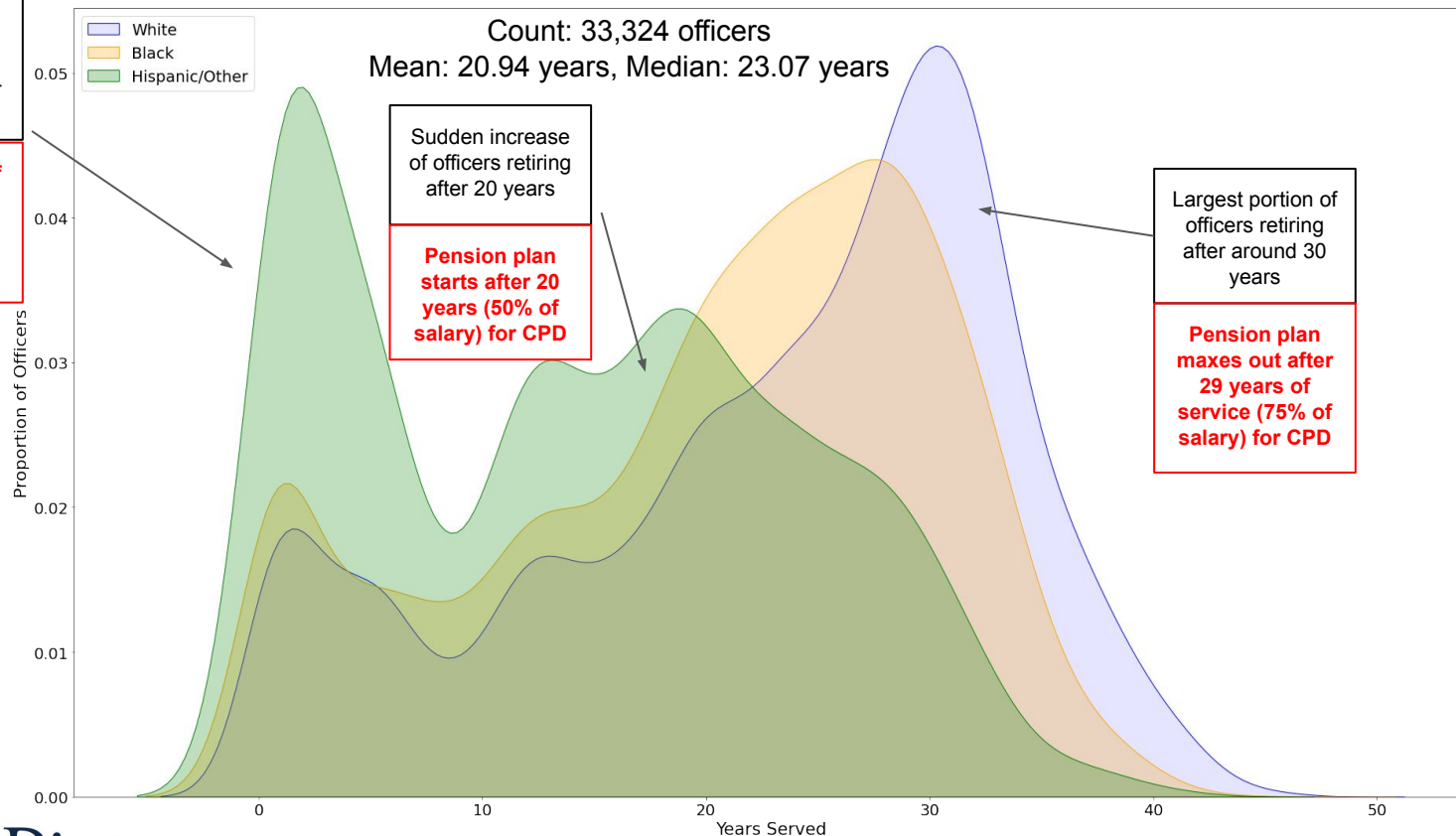
Race/Ethnicity by Officer Rank



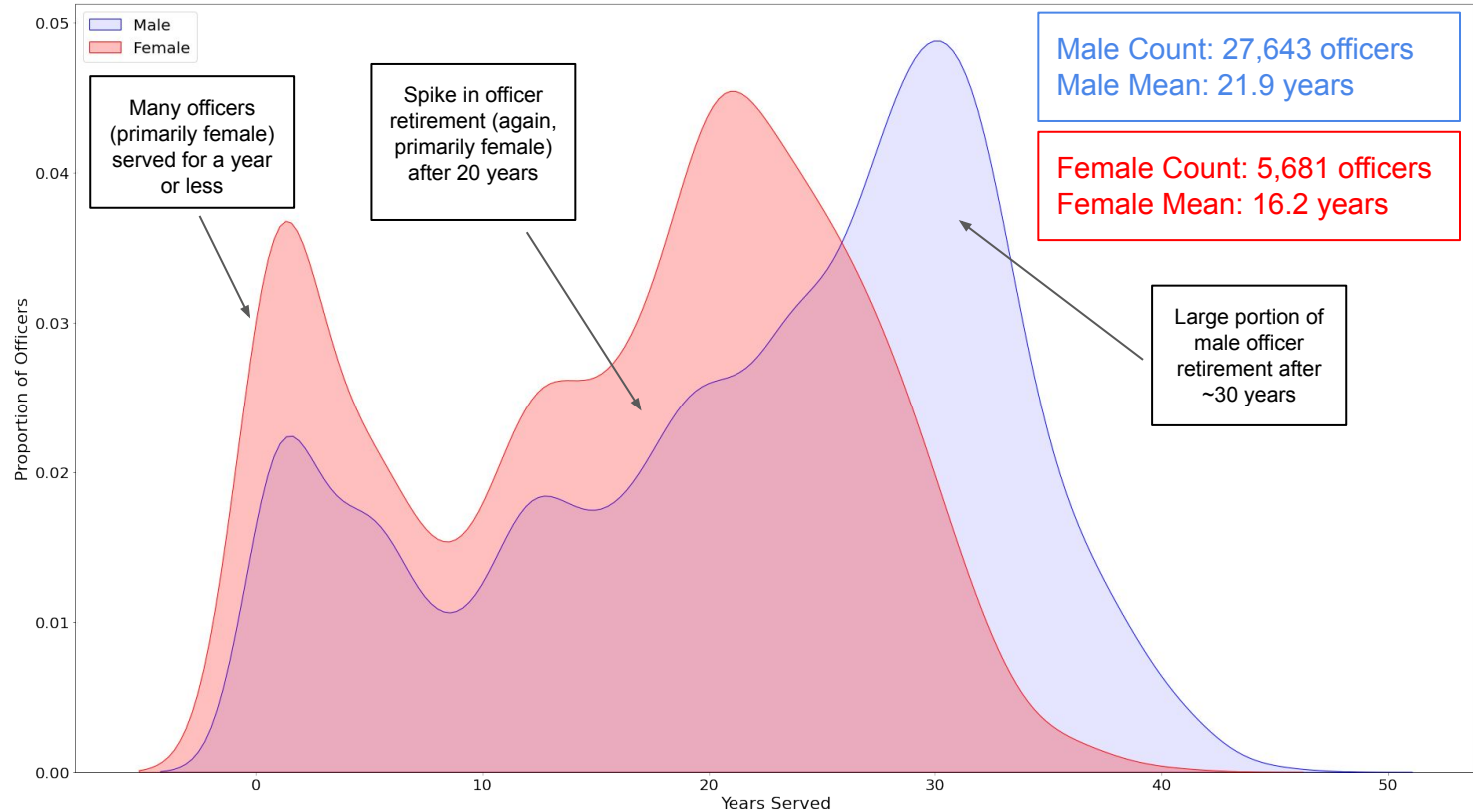
Gender by Officer Rank



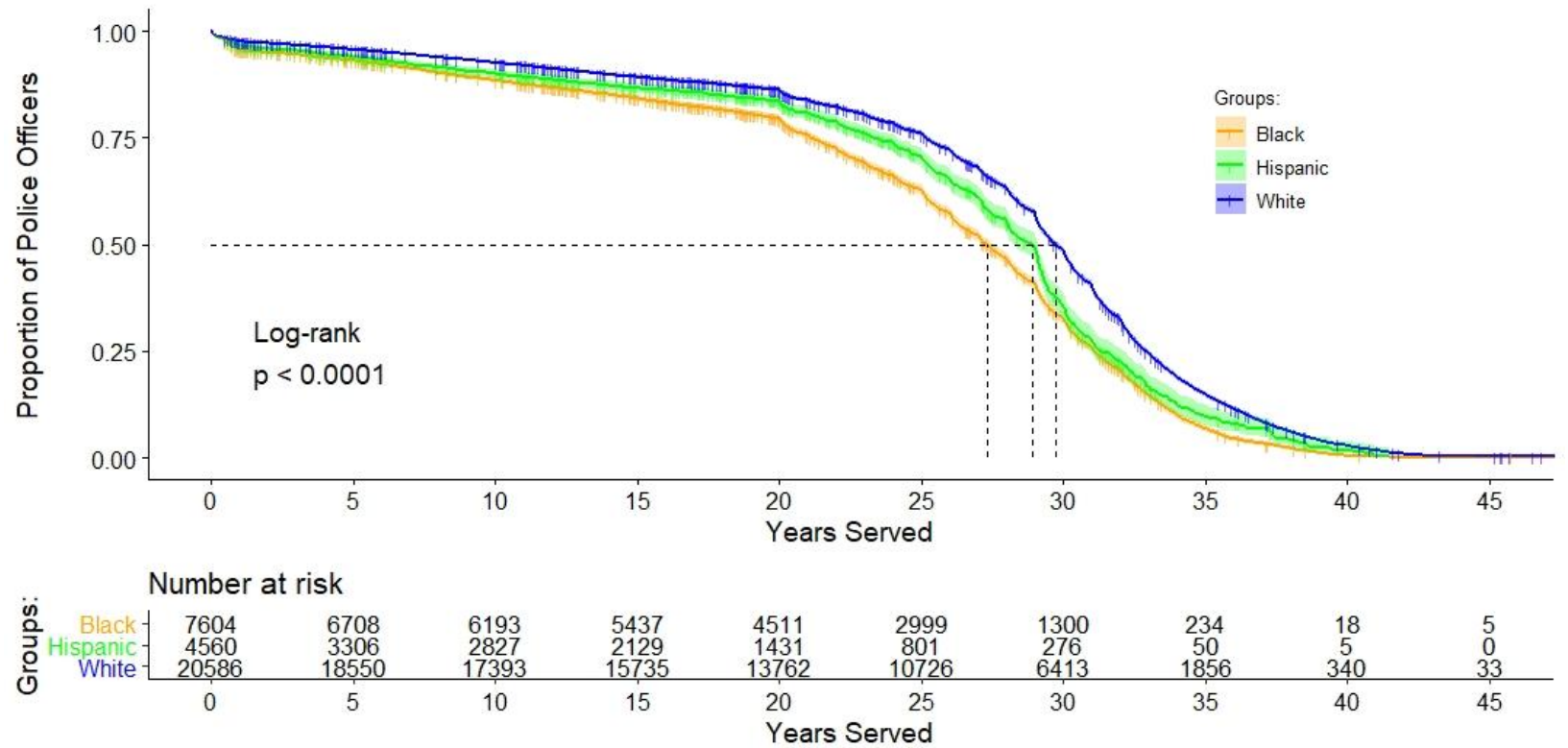
Years Served by Race/Ethnicity



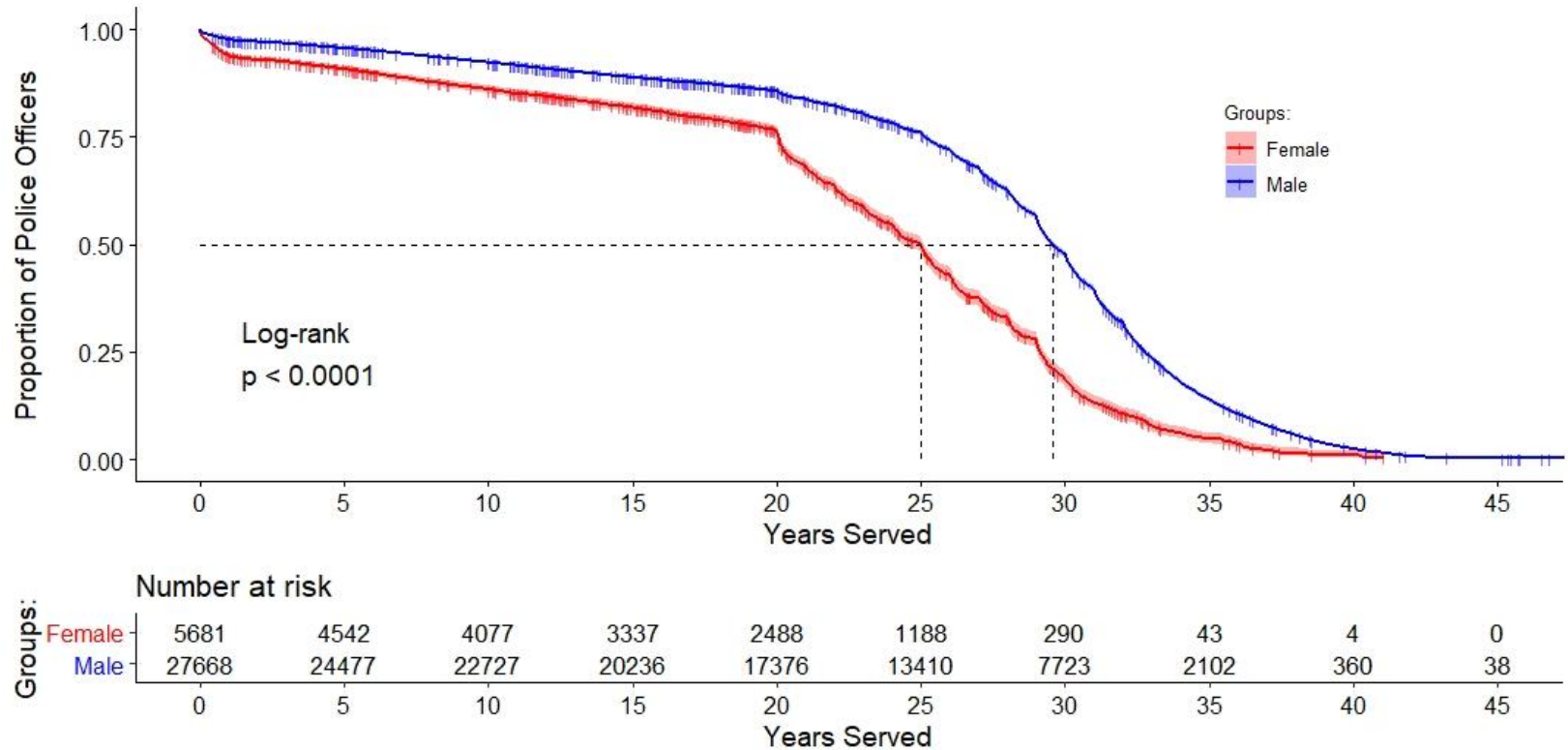
Years Served by Gender



Kaplan Meier Analysis of Years Served by Race/Ethnicity

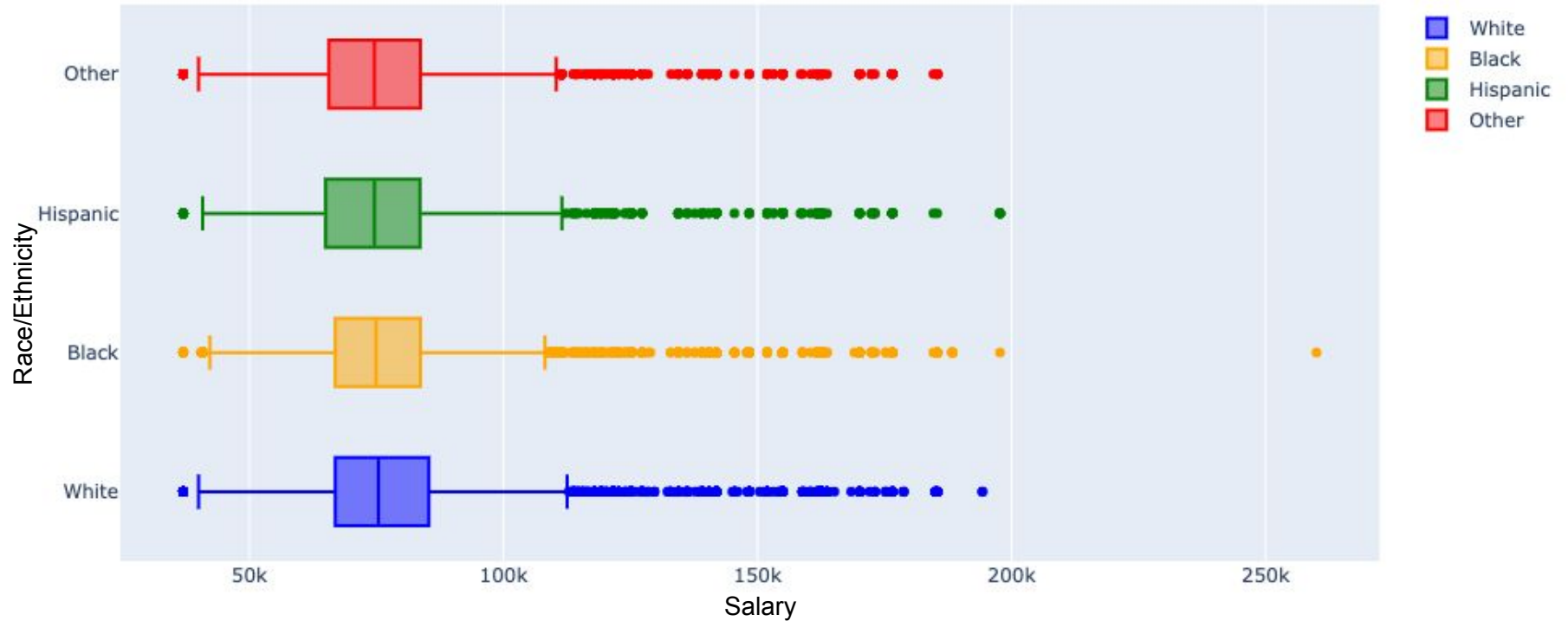


Kaplan Meier Analysis of Years Served by Gender

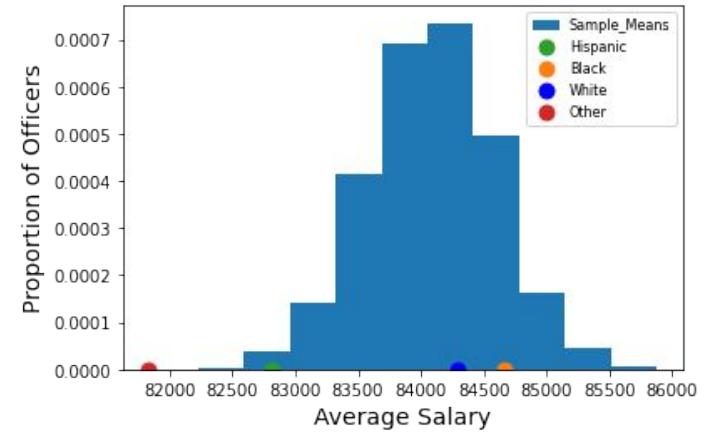
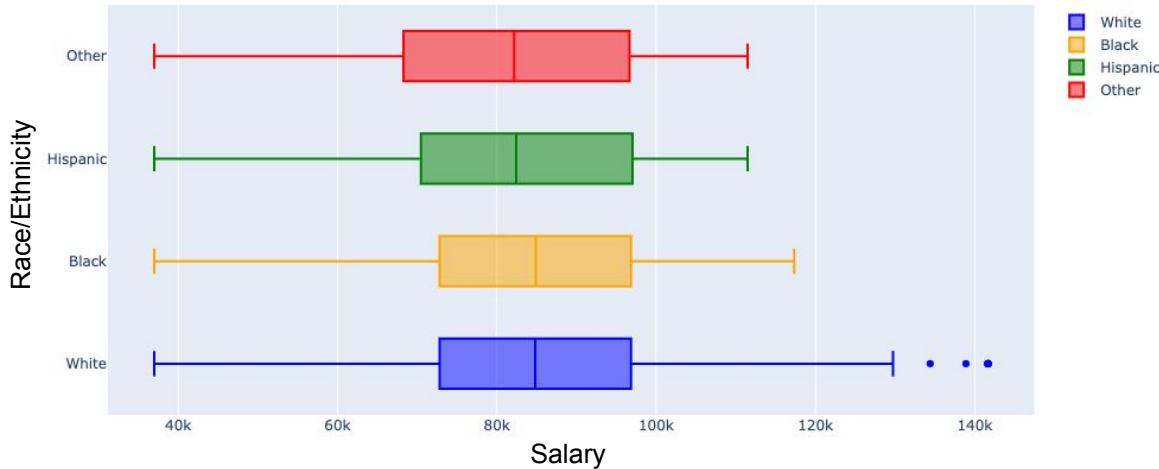


ANALYSIS OF SALARIES

Salary by Race/Ethnicity

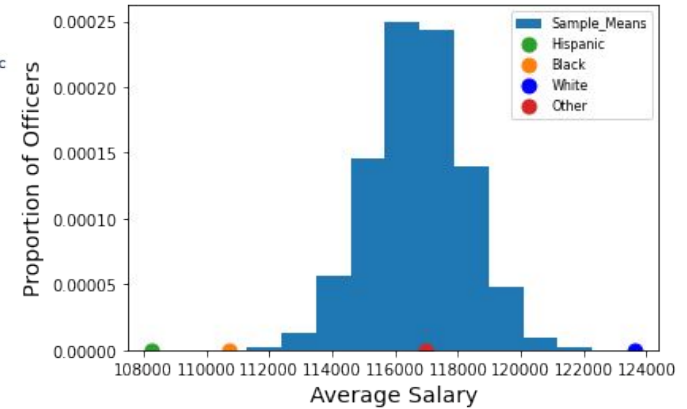
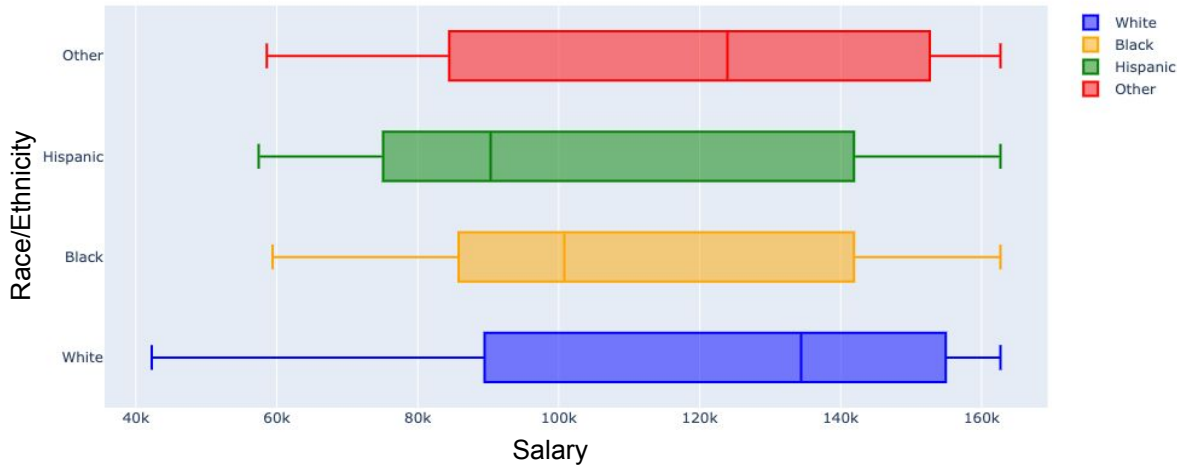


Salary by Officer Rank: Sergeant



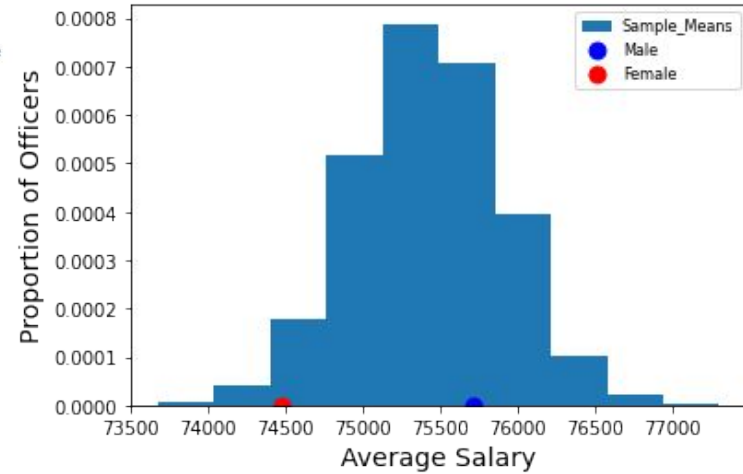
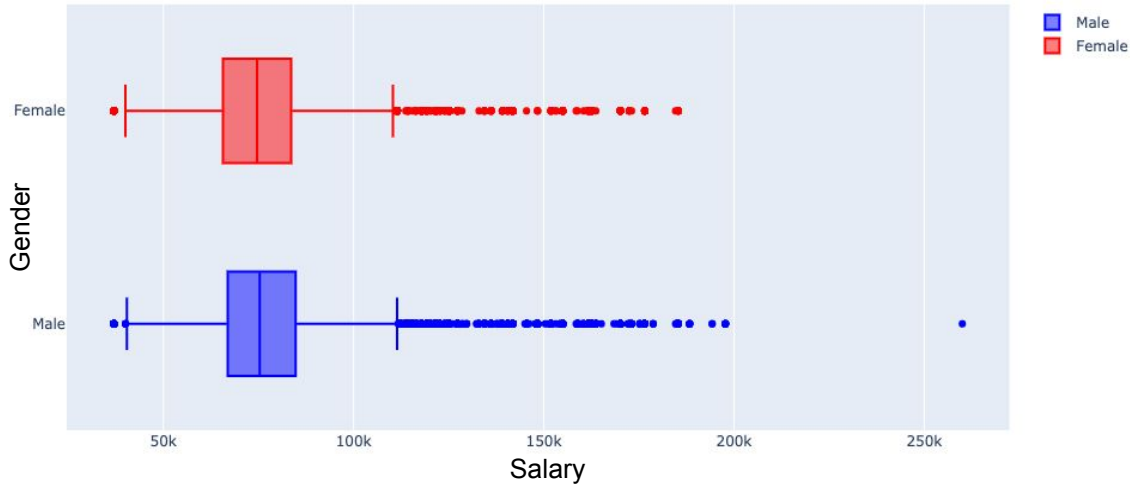
p-value < 0.001

Salary by Officer Rank: Commander



p-value < 0.001

Salary by Gender



ANALYSIS OF COMPLAINTS

Complaints of Excessive Force

244k records of complaints
against Chicago PD officers
between 2000 to 2016

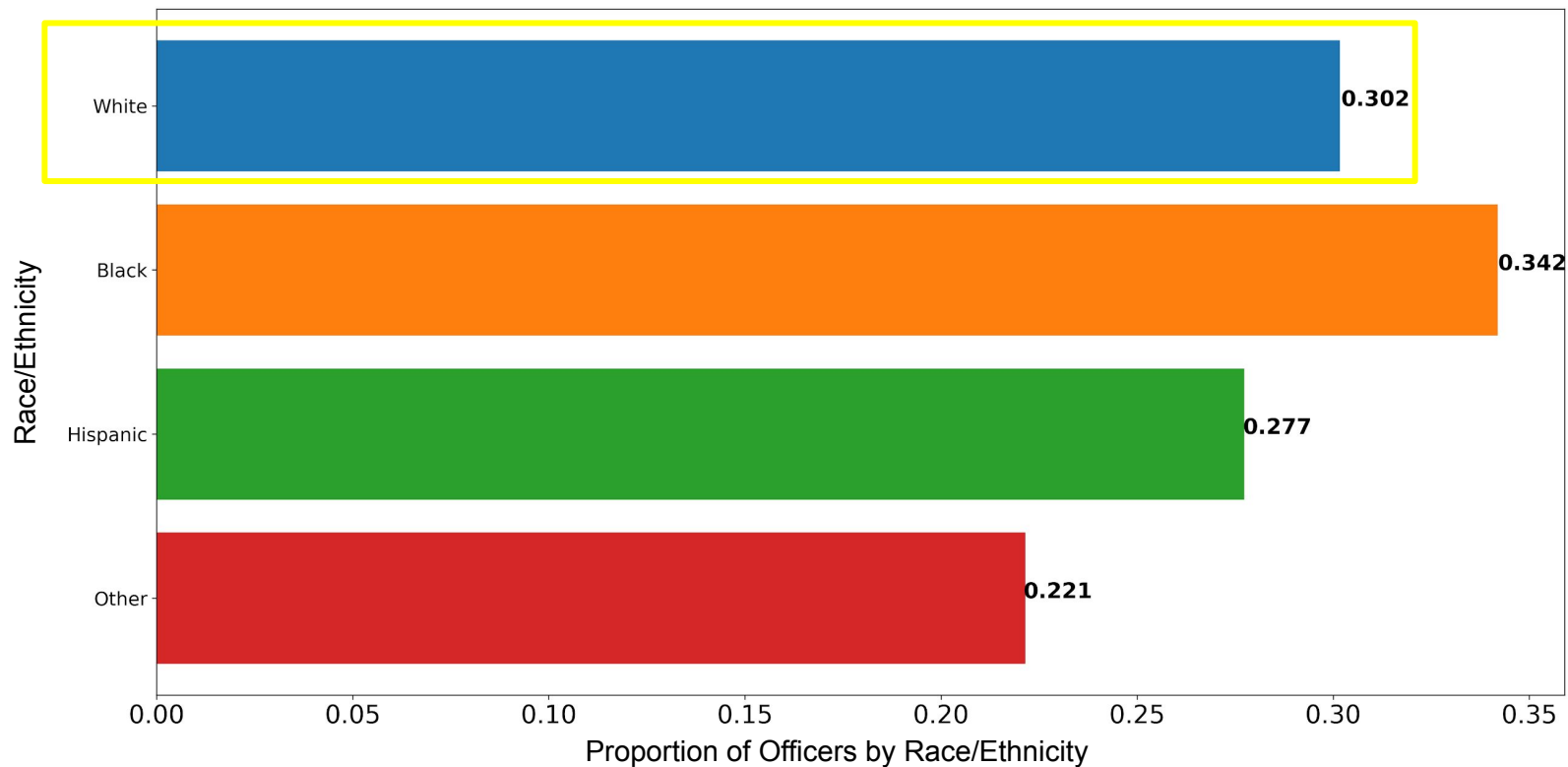
32.5k complaints, or 17.2% of
all complaints, were use of
Excessive Force

**98.2% of Excessive Force
complaints resulted in no
consequences or
reprimands for the officers**

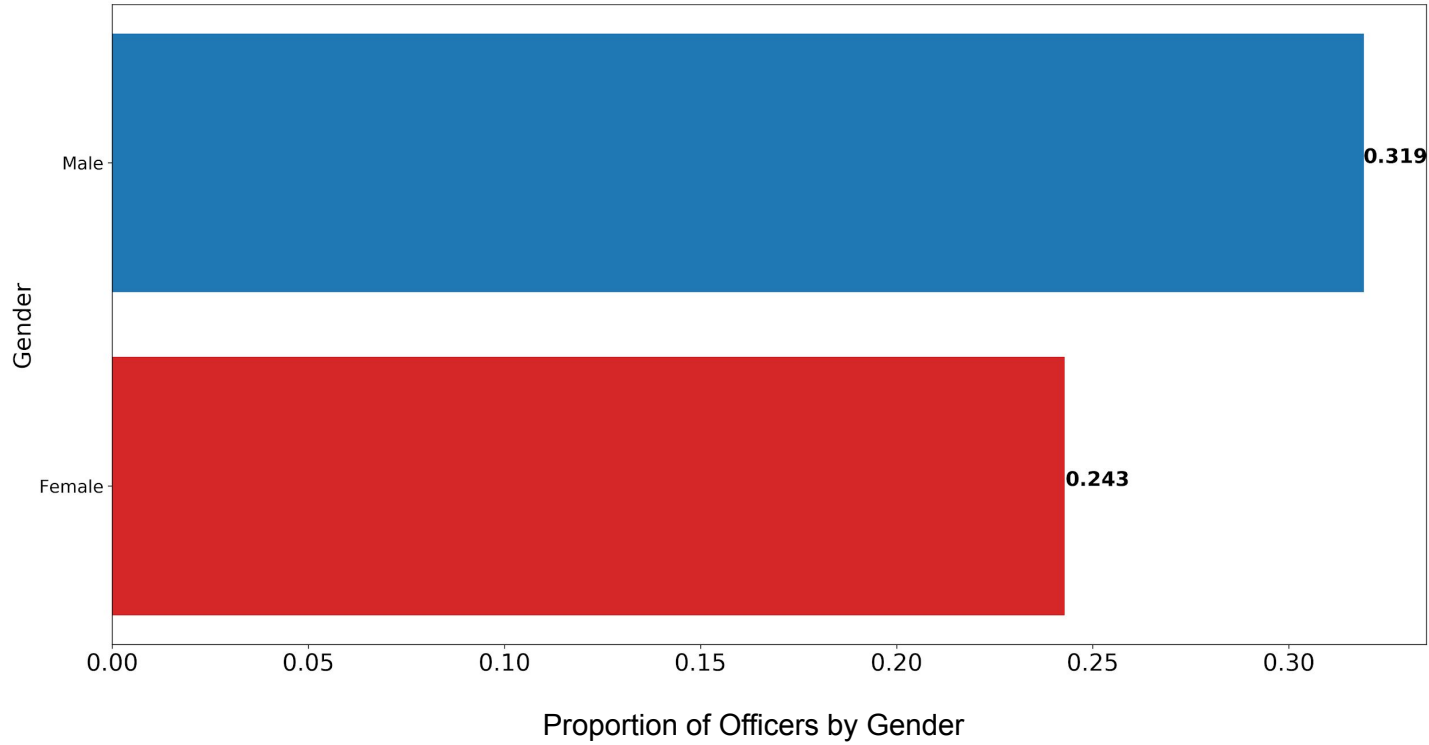


Source: Getty Images

Proportion of Officers with Excessive Force Complaints to Total Officers Within Each Race/Ethnicity



Proportion of Officers with Excessive Force Complaints to Total Officers Within Each Gender



Significance of This Project

Problems	Proposed Solutions
<ol style="list-style-type: none">1. Major disparities in race/ethnicity and gender across salary, years served, rank, etc. of Chicago PD<ol style="list-style-type: none">a. Similar disparities likely exist in police departments across the US2. Minimal disciplinary action for officers with complaints of Excessive Force	<ol style="list-style-type: none">1. Promoting diversity within Police Departments likely be a solution to increase Fair Policing<ol style="list-style-type: none">a. Diversity trainingb. Hiring officers who are more representative of city population2. Increased accountability for use of excessive force should be implemented<ol style="list-style-type: none">a. Body camerasb. Citizen review committees

Thank you for your attention!