

# Fair Policing Analysis in Chicago

Team Lead: Aryaman Sinha

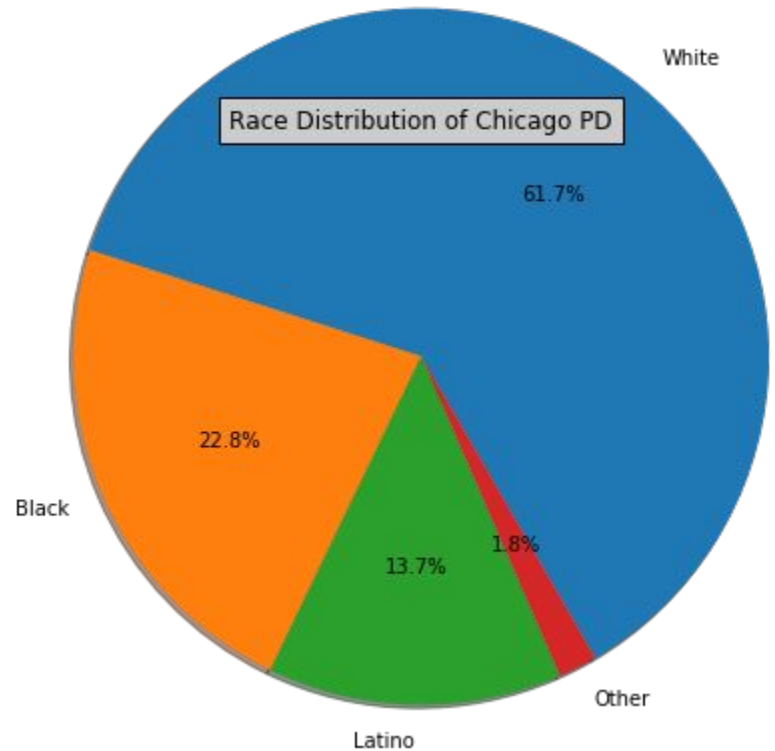
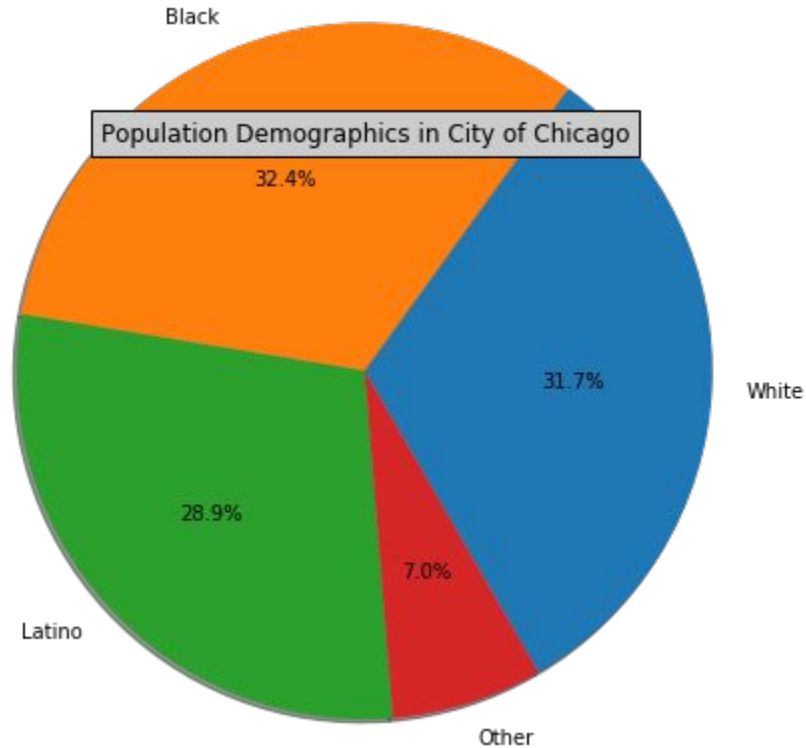
Team Members: Koosha Jadbabaei, Anika Garg



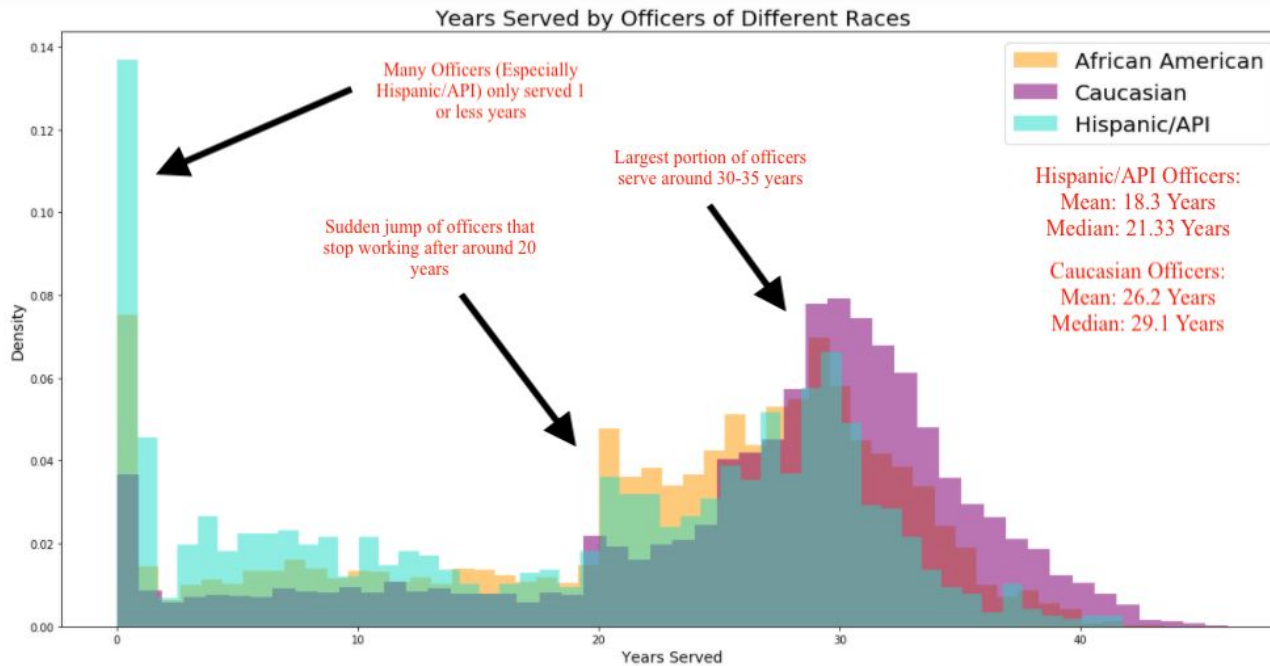
# Data

- Chicago PD Dataset
- Dates from last 50 Years
- Includes data on officer profiles, years served, complaints, Chicago demographics, awards, promotions, salaries, etc.
- Messy: Files were poorly names, data collection changed over last 50 years, a lot of missing data and NaN values
- 35% of data missing for White, Black, 75% missing for Hispanic and API/other

# Chicago Demographics



# Years Served by Race

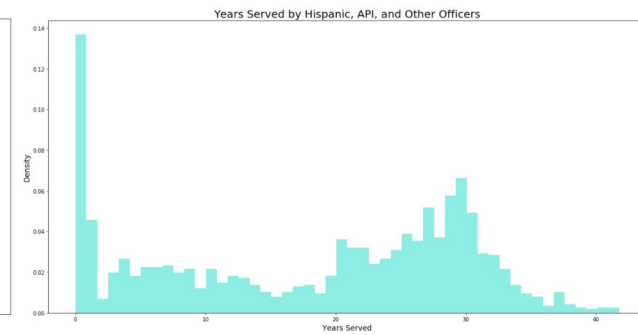
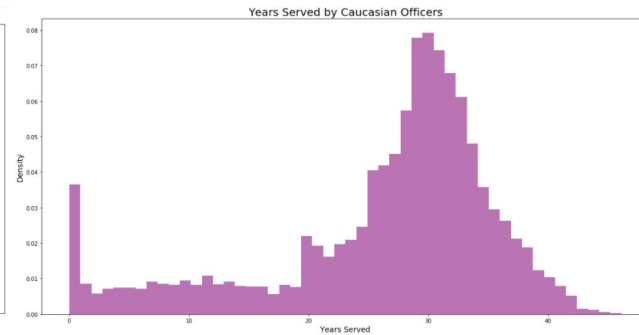
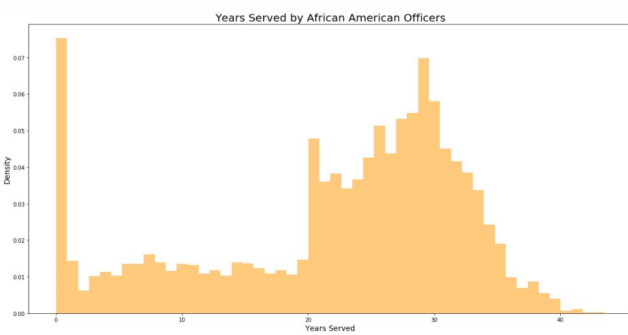


## Officer Summary Statistics:

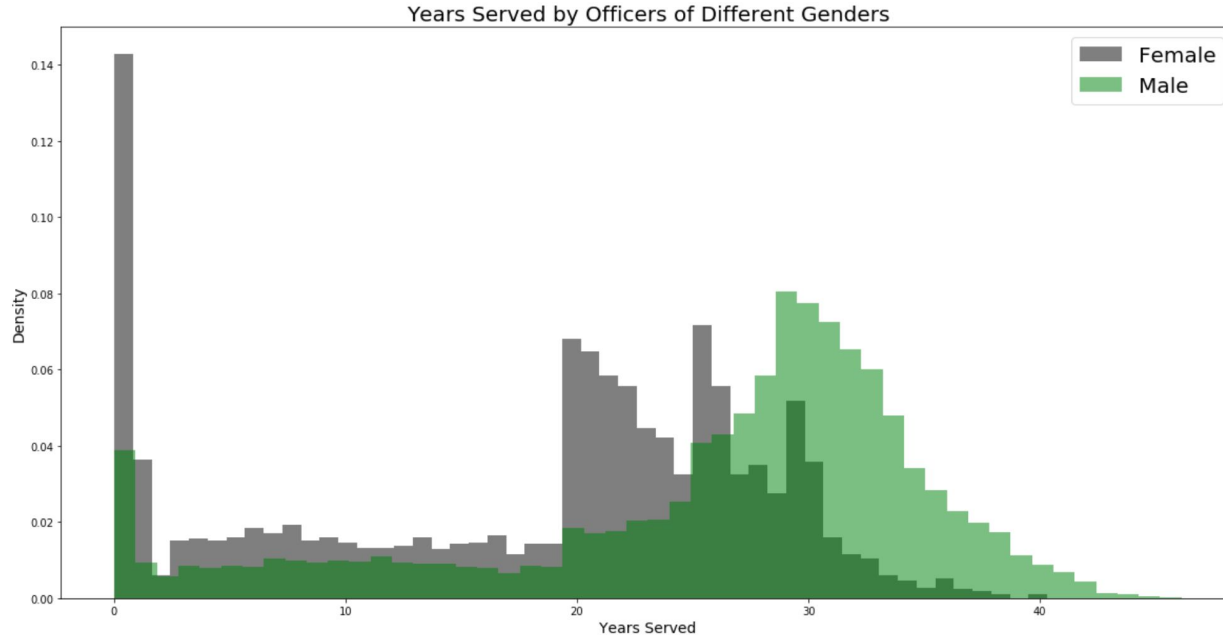
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count    20075.000000
mean      24.704415
std       10.400110
min        0.010000
25%       20.305000
50%       28.050000
75%       31.680000
max       46.120000
dtype: float64
```

# Years Served by Race Analysis

- Only 25% of Hispanic/API officers had accurate/useable data
- After working 20+ years up to 33 years, officers can receive pension plan that starts at 50% of their salary



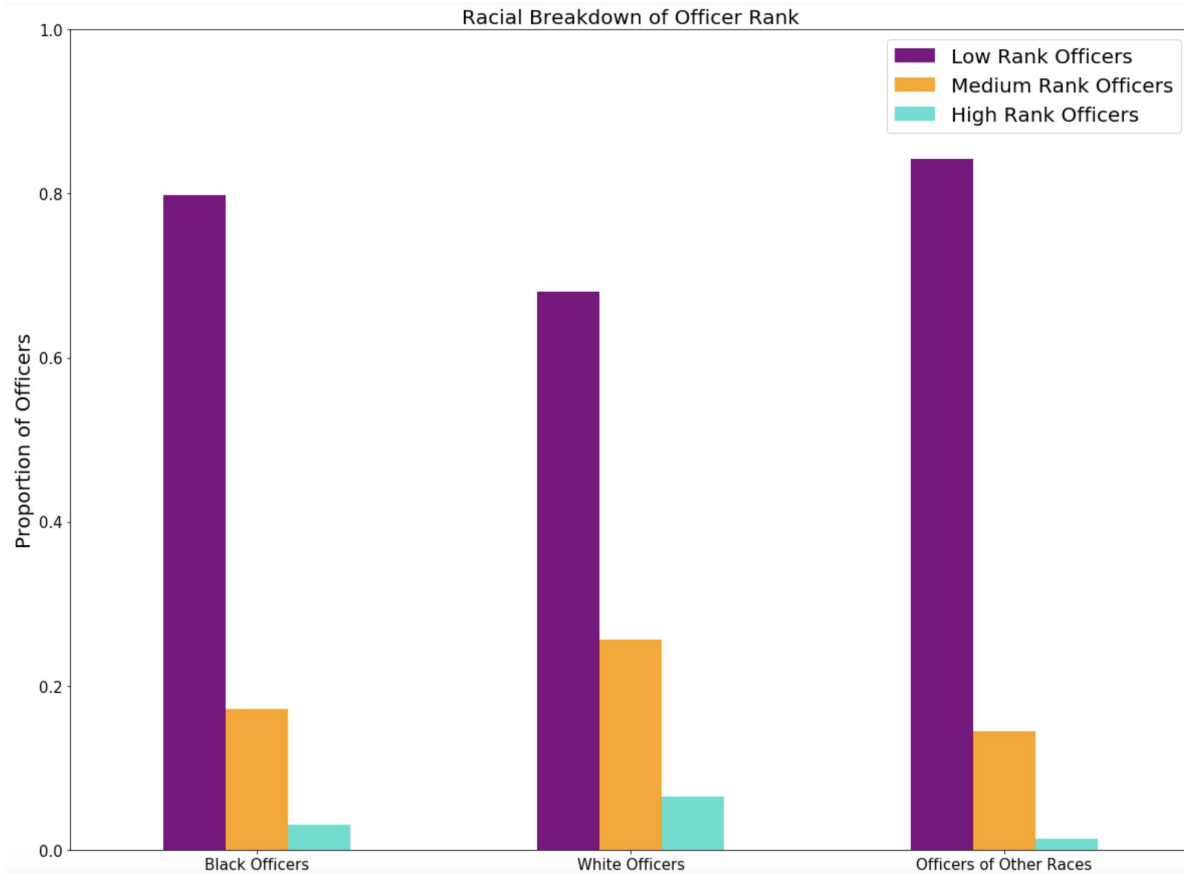
# Years Served by Gender



## Officer Summary Statistics:

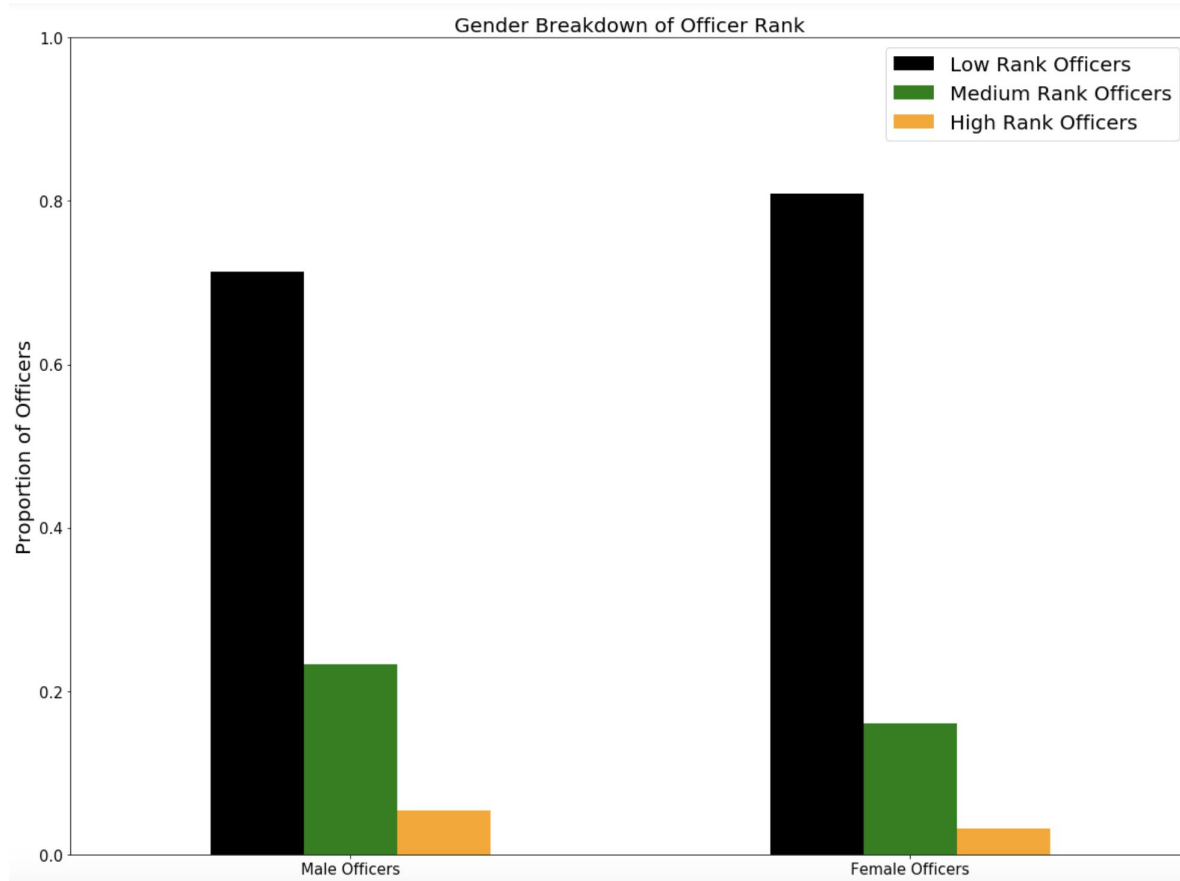
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count    20075.000000
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min        0.010000
25%       20.305000
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max       46.120000
dtype: float64
```

# Racial Breakdown of Officer Rank

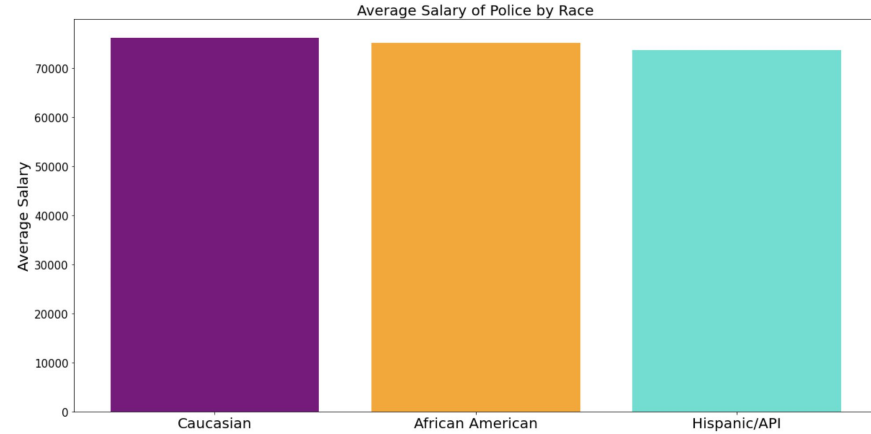
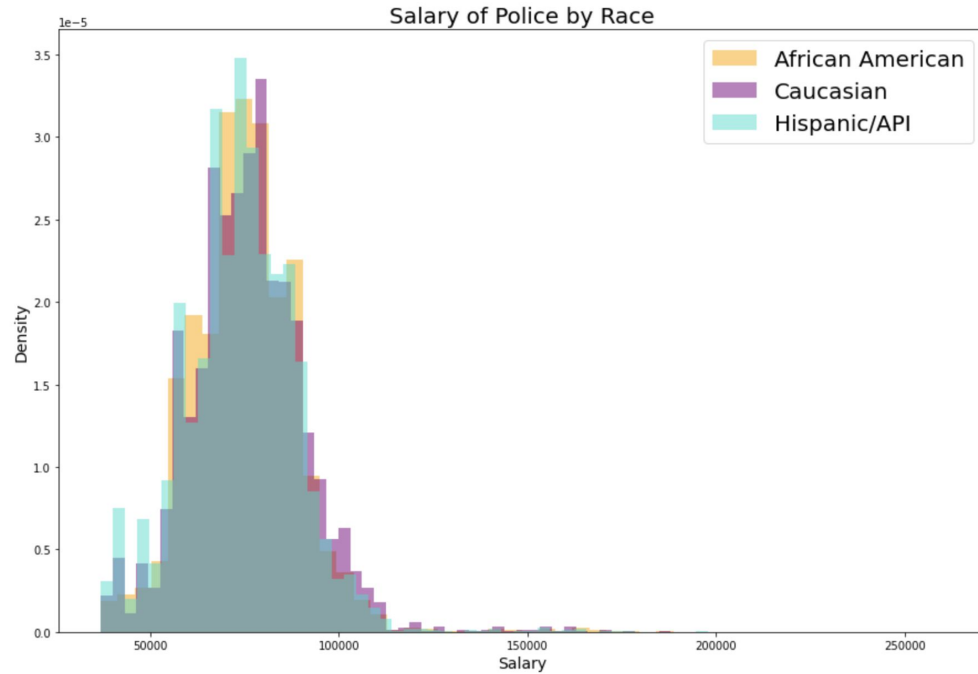




# Gender Breakdown of Officer Rank

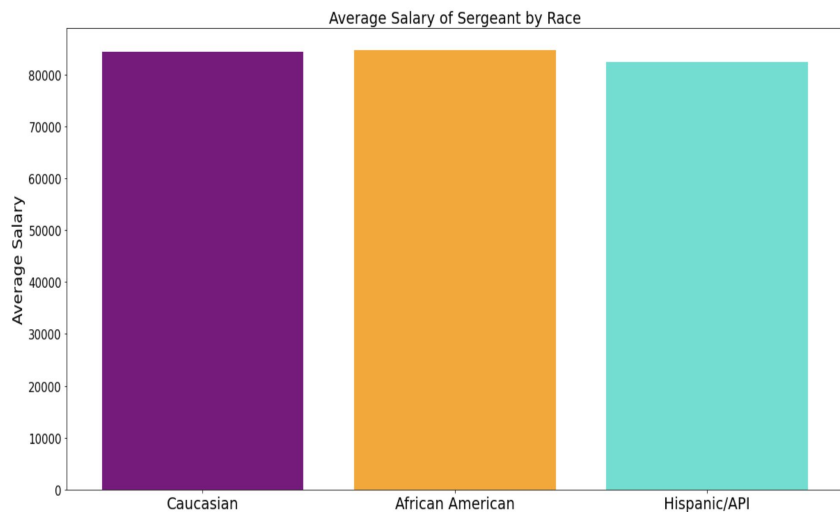


# Salary vs Race

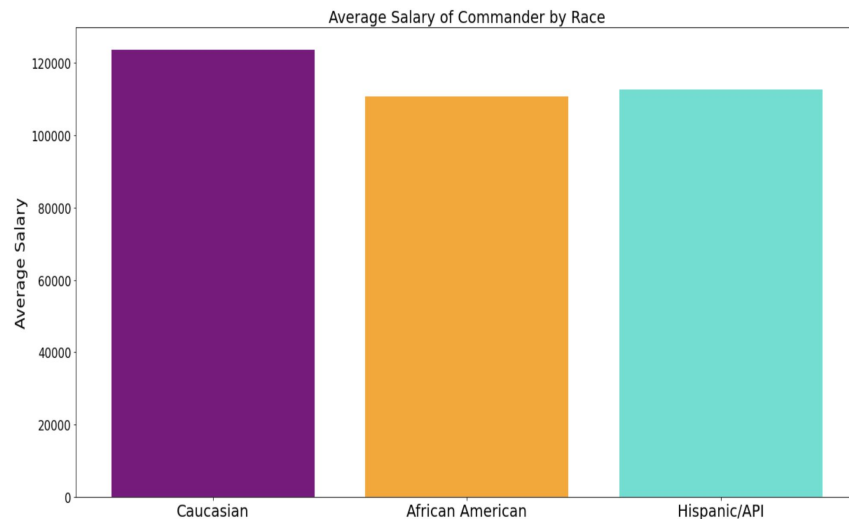


# Salary by Officer Rank

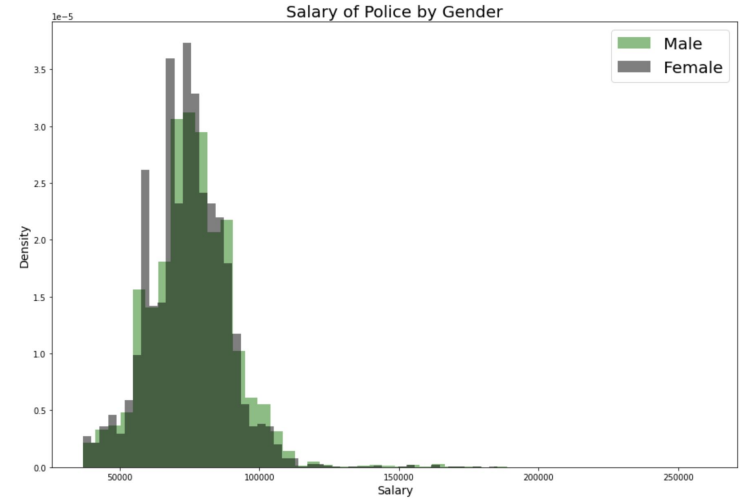
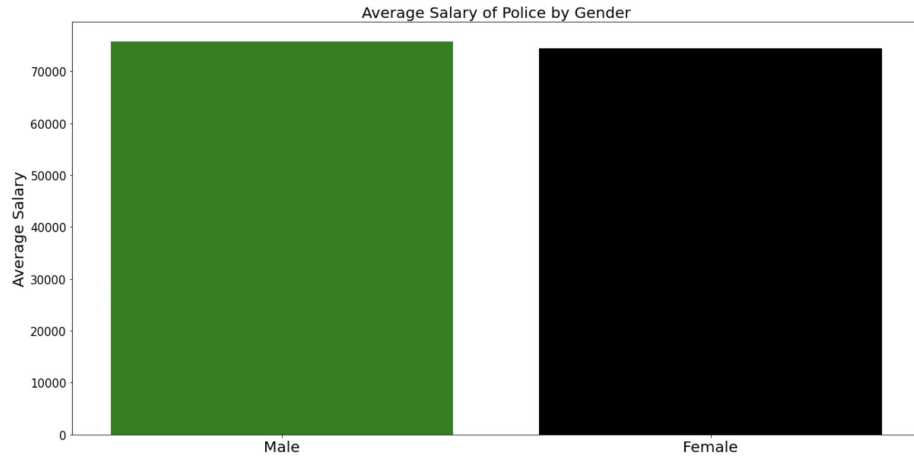
## Sergeant



## Commander

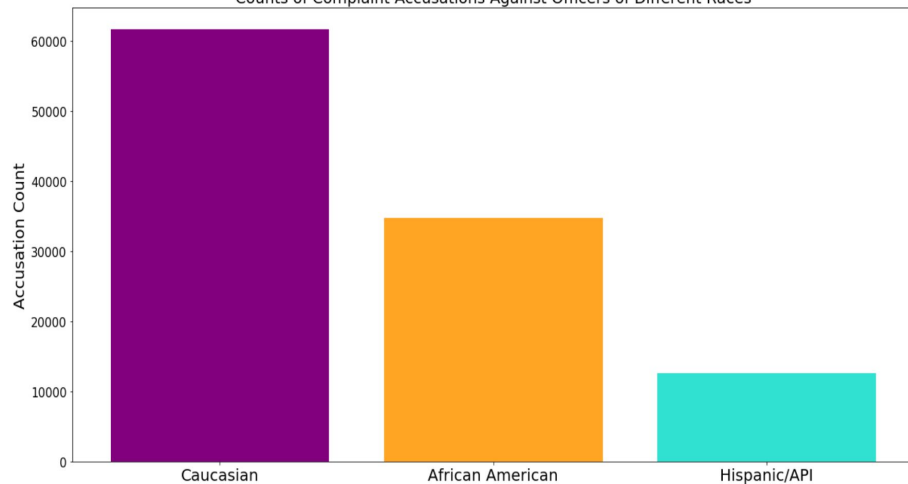


# Salary vs Gender

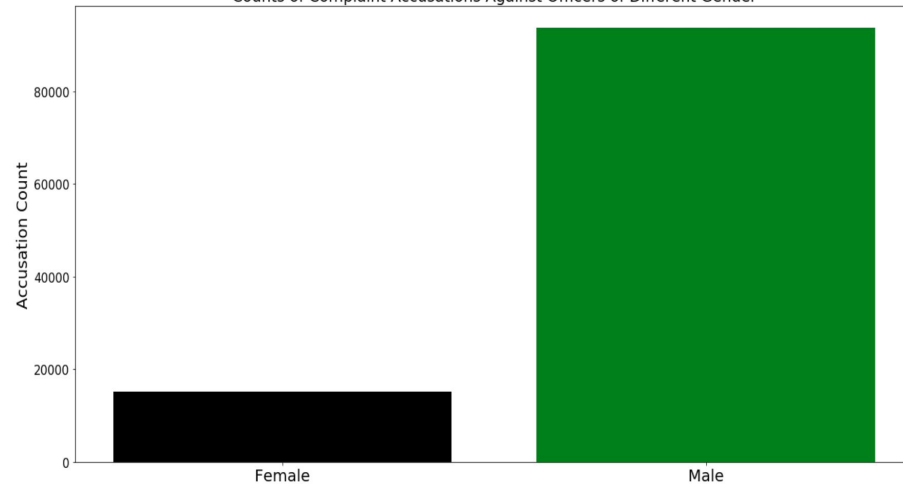


# Complaints Against Officers

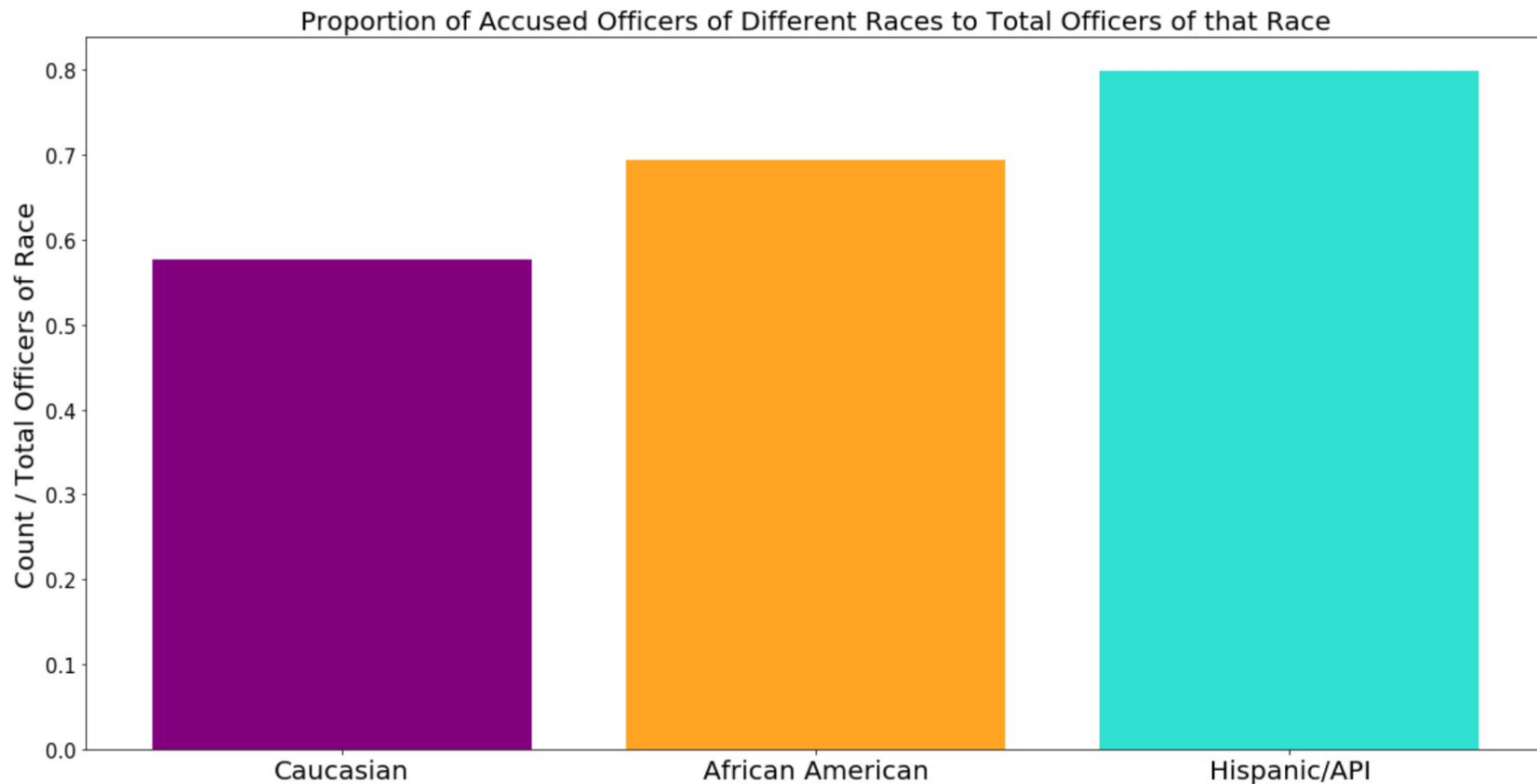
Counts of Complaint Accusations Against Officers of Different Races



Counts of Complaint Accusations Against Officers of Different Gender



# Complaints Against Officers Cont.



# Complaints of Excessive Force

- Around 244k records of complaints against officers between 2000 to 2016
- 42k of these were complaints of Excessive Force
- **98.2% of these resulted in no consequences or reprimands for the officers**



# Implications

- Analysis portrays disparities in several aspects of Chicago PD
- Echoes how their could be and are similar disparities in Police Departments across the US and world
- Needs to be action to fix this
- Creating more diverse Police Departments could be a solution to increasing Fair Policing
- More accountability in terms of use of excessive force should be instated