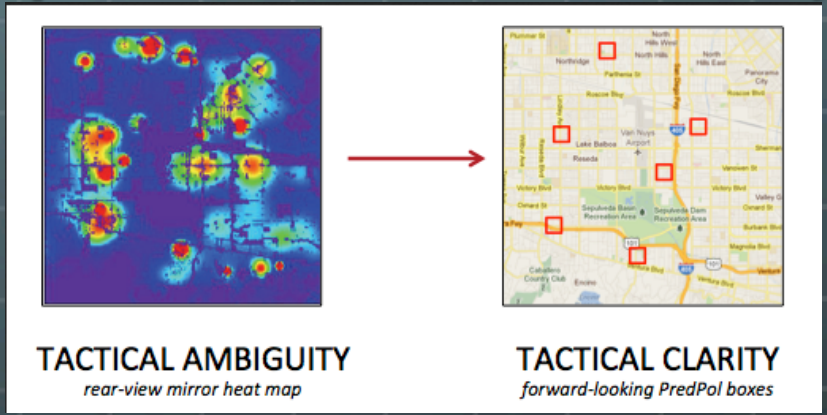
Predictive Policing

What is it and how does it work?

- Predictive policing is the use of mathematical analytics by law enforcement to predict and respond to potential criminal activity.



- Police apply statistical or machine learning algorithms to data from police records on the times, locations, and nature of past crimes, to look for potential patterns in when, where or what crimes may occur in the future.

Predictive Policing

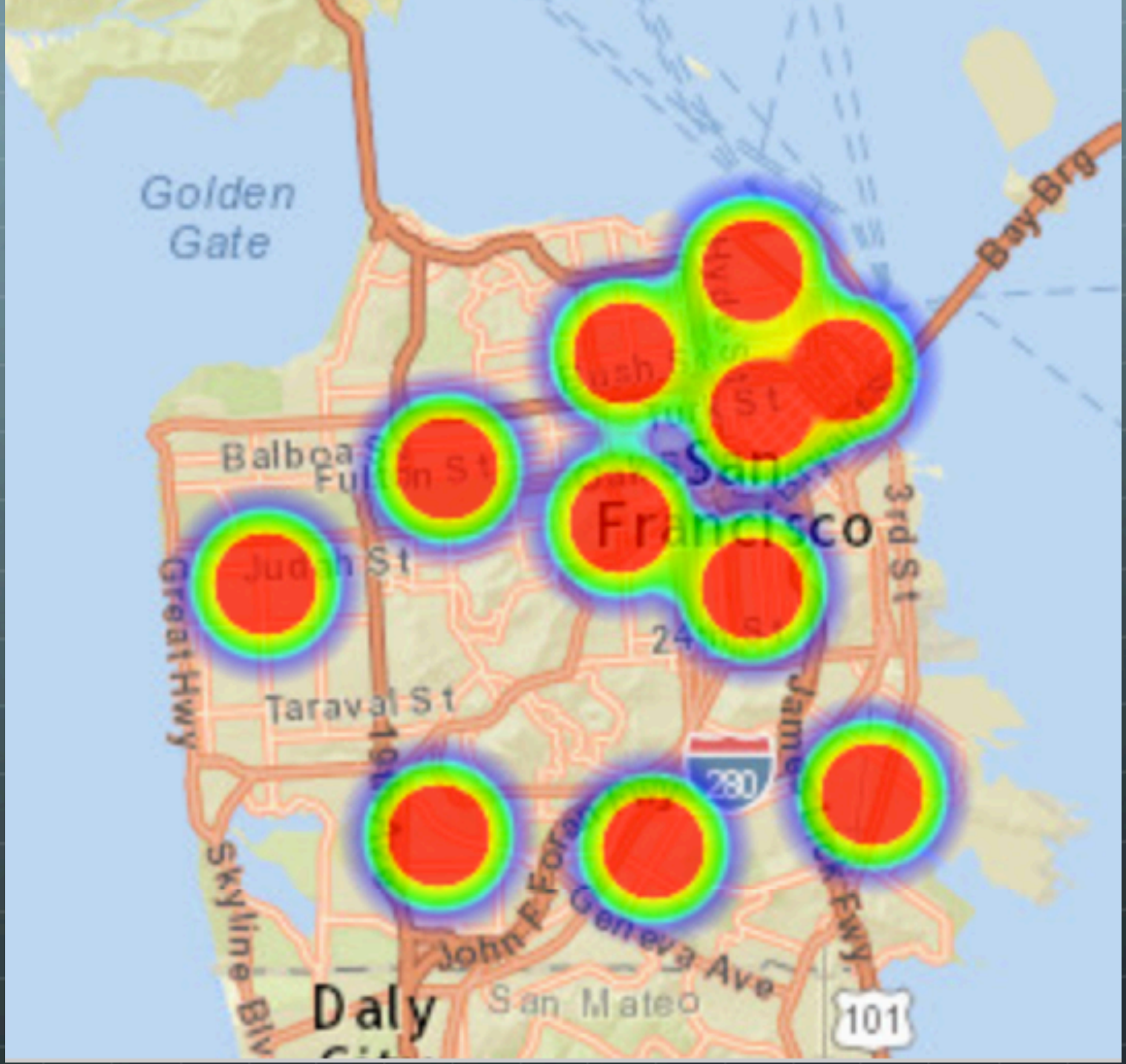
What is it & how does it work?

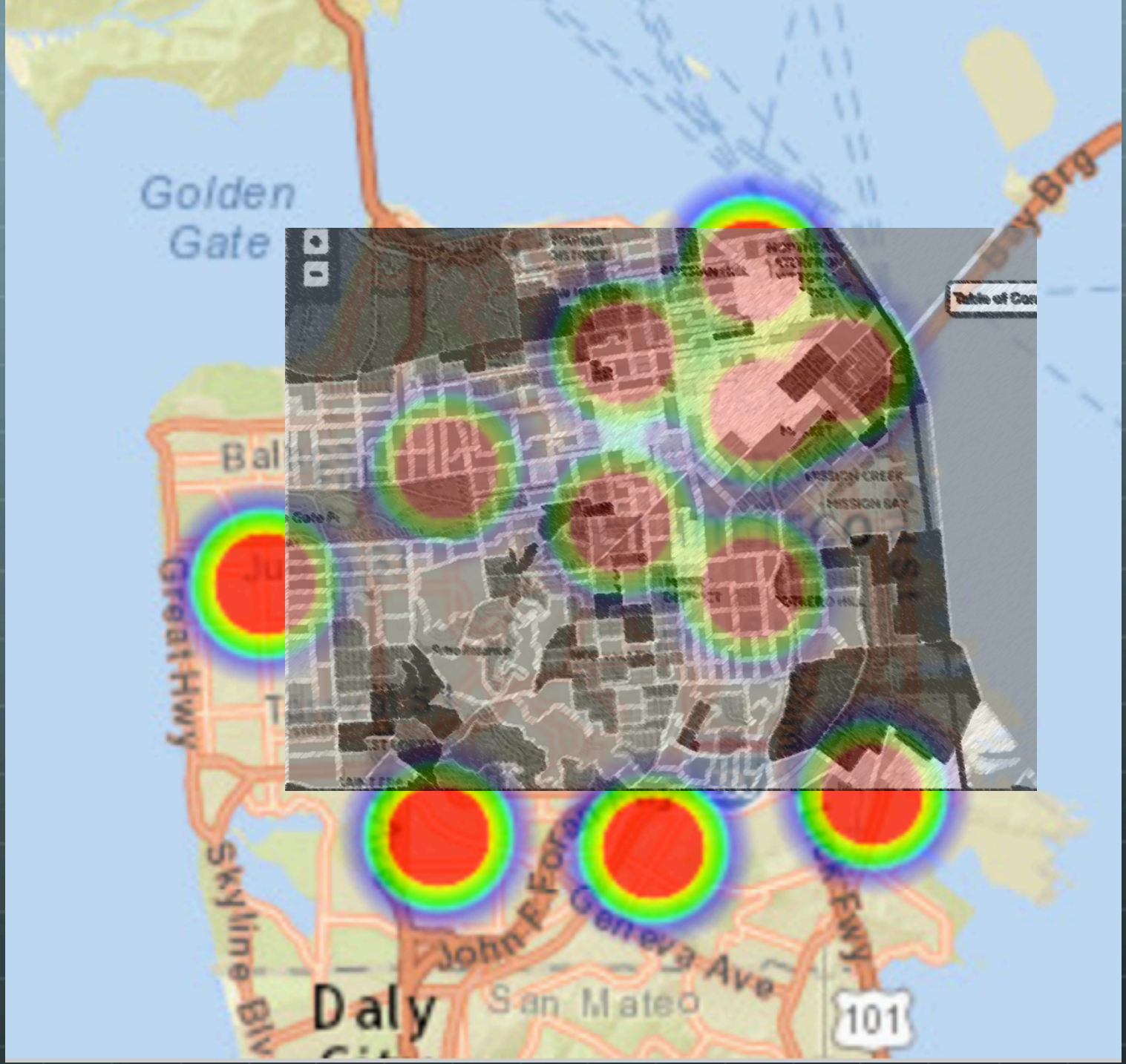
- Predictive policing methods generally fall into four categories:
  1. methods for predicting crimes
  2. methods for predicting offenders
  3. methods for predicting potential perpetrators' identities
  4. methods for predicting victims of crime

Predictive Policing Algorithms

What are the problems with predictive policing?

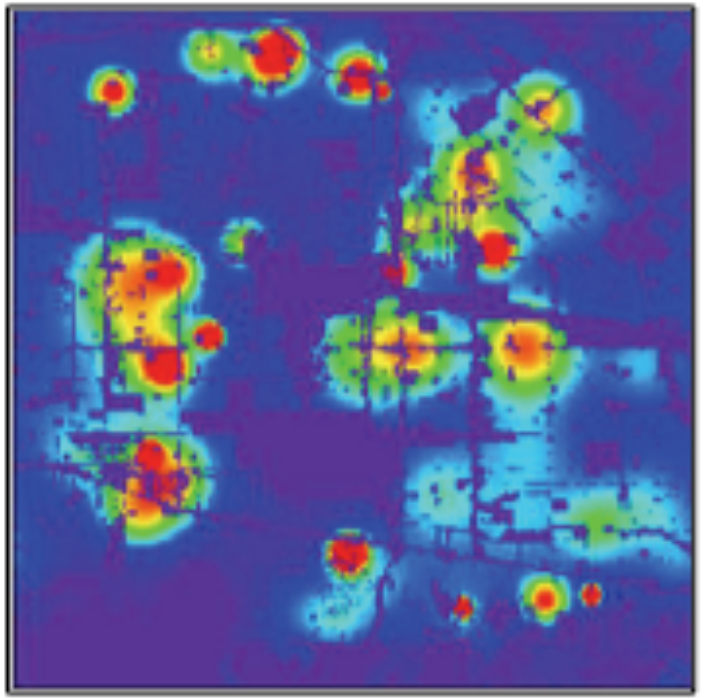
- Systemic Bias - It amplifies racial disparities in policing by relying on patterns in police record keeping, not patterns in actual crime.
- Data censoring/omission - Not all crimes and suspects are treated equally. Locations and communities that are heavily patrolled and recorded by police are *over*-represented in police records.
- This leads to higher predictions of criminality for low-income communities of color that are disproportionately targeted, patrolled, and recorded by police.

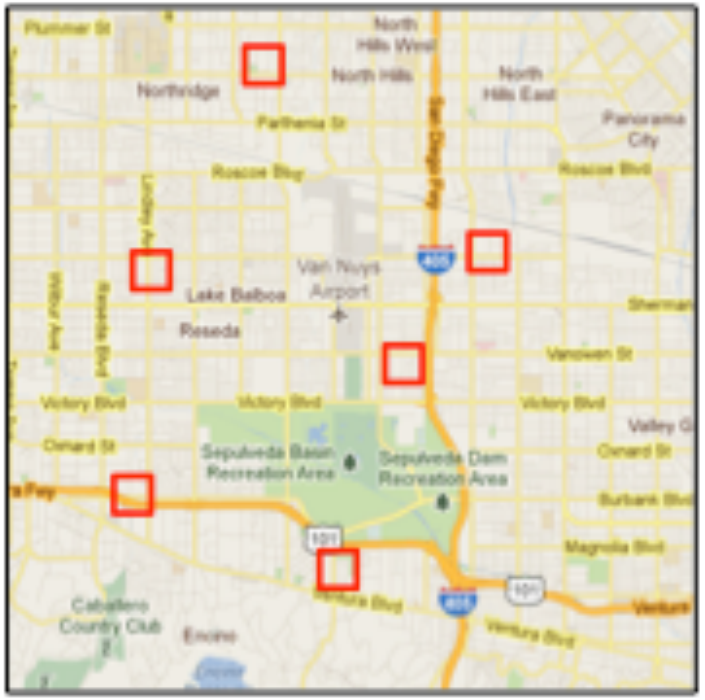

Golden Gate
Bay Brg
Balboa St
Fulton St
Judah St
Great Hwy
Taraval St
3rd St
280
Skyline Blvd
John F Foran
Geneva Ave
San Mateo
Daly
101


Golden
Gate
Great Hwy
Skyline Blvd
John F Foran
Geneva Ave
San Mateo
Daly
101

Predictive Policing Algorithms

What are the problems with predictive policing?



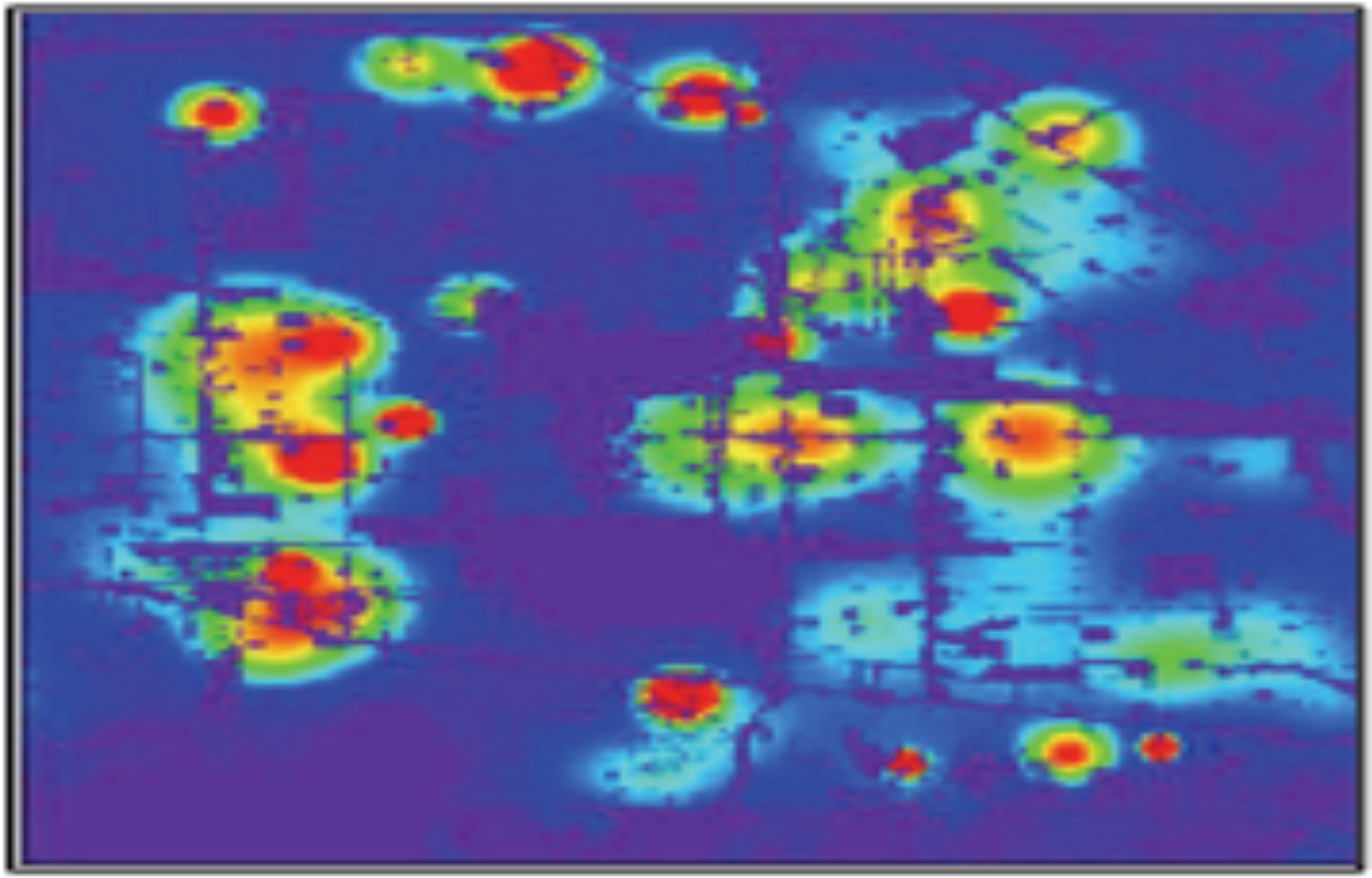


TACTICAL AMBIGUITY

rear-view mirror heat map

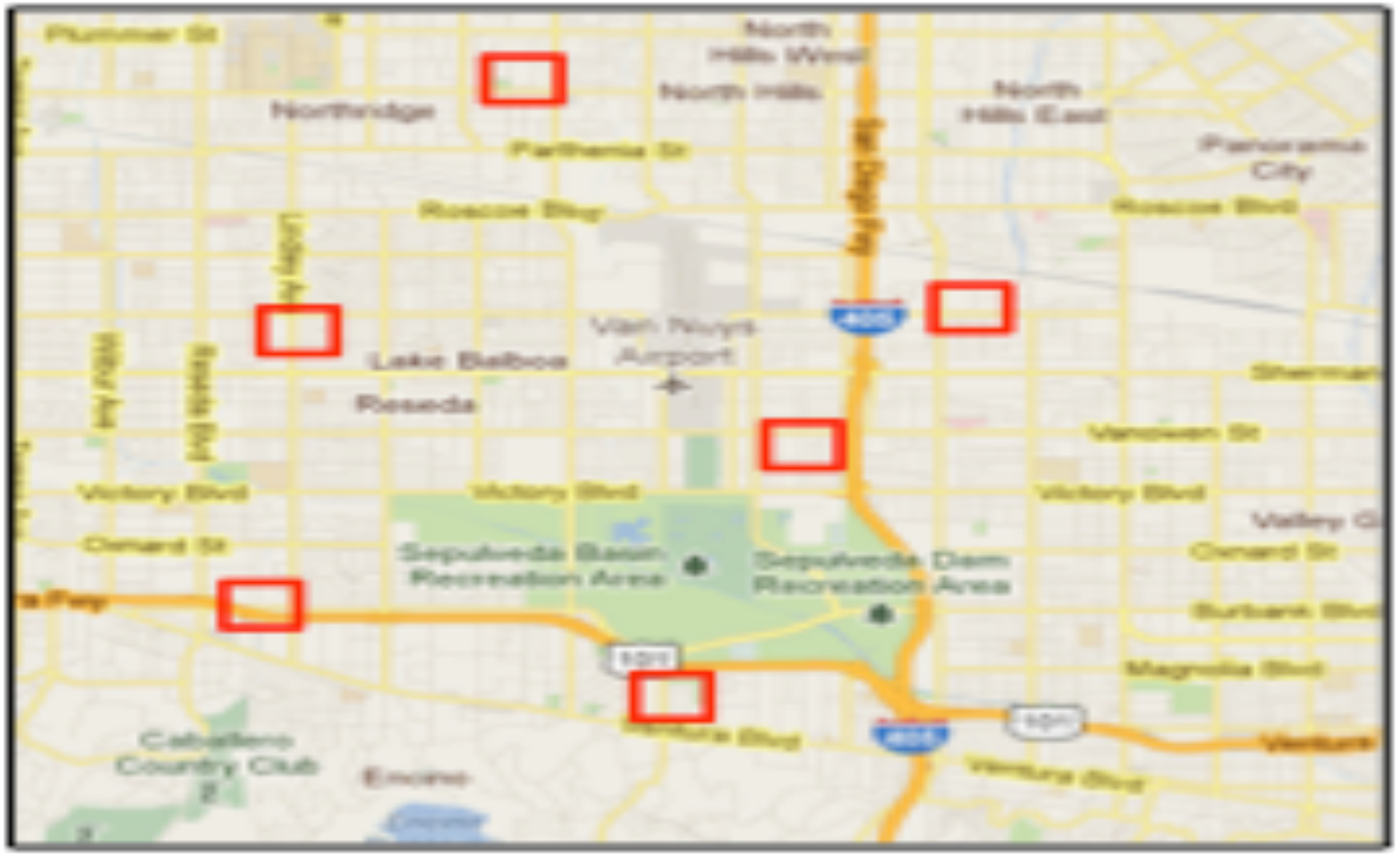
TACTICAL CLARITY

forward-looking PredPol boxes



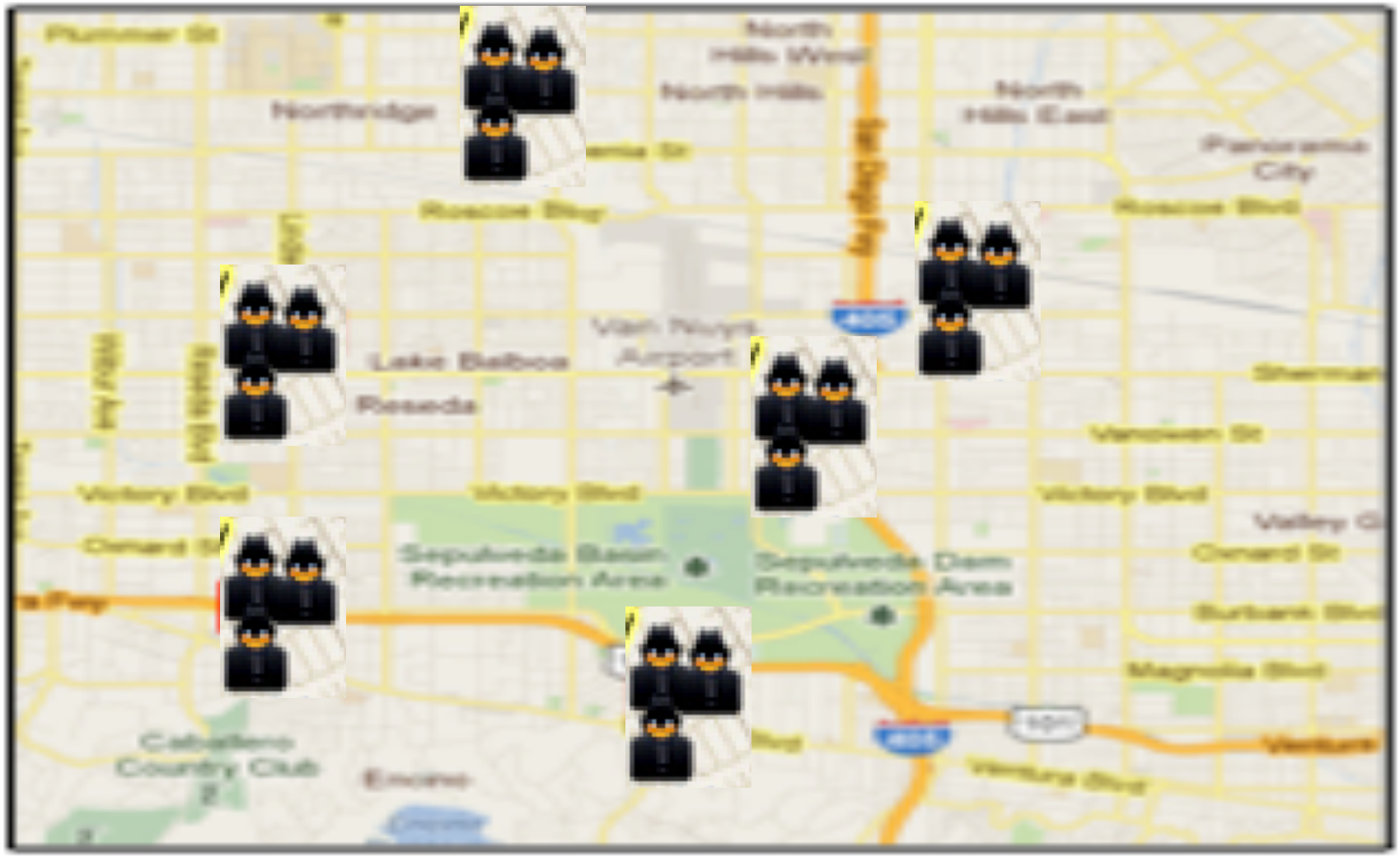
TACTICAL AMBIGUITY

rear-view mirror heat map



TACTICAL CLARITY

forward-looking PredPol boxes



TACTICAL CLARITY

forward-looking PredPol boxes

TACTICAL CLARITY

forward-looking PredPol boxes

TACTICAL CLARITY

forward-looking PredPol boxes

Predictive Policing Algorithms

How do I know if police are using a predictive policing program?

- Specifically request discovery on the use of predictive policing software
- Popular predictive policing programs to be on the lookout for:
  1. Predpol - http://www.predpol.com/
  2. Hunchlab - https://www.hunchlab.com/
  3. Civicscape - https://www.civicscape.com/

Predictive Policing Algorithms

Oakland Case Study by Human Rights Data Analysis Group:

- HRDAG looked at OPD's recorded drug crimes and applied a predictive policing algorithm to assess where the algorithm suggested police look for future drug crimes.
- They found that targeted policing would have been dispatched almost exclusively to lower income, minority neighborhoods because the majority of the drug crimes recorded by police were in these neighborhoods.

Predictive Policing Algorithms

Oakland Case Study by Human Rights Data Analysis Group:

- But public health data on drug users combined with high resolution US Census data, showed that the distribution of drug users did not agree with the program's predictions.
- If this algorithm actually had been used with the goal of predicting and preventing crime in Oakland, it would have failed by sending police back into the communities they were already over-policing.

Predictive Policing Algorithms

How do I challenge predictive policing evidence?

- Subpoena the contract between the police dept and predictive policing software developers to review limits in programming capabilities
- Move to compel error rates and false positives.
- Consider filing a motion to compel the program source code to search for flaws that may affect predictive search results.
- Move to suppress evidence resulting from police use of biased data sets. (cite HDRAG study)

Predictive Policing

Examples of other predictive policing tools?

- Public Safety Assessment (PSA) for bail release
- COMPAS Assessment for PSR/sentencing
- Bi-Analytics: Analyzes travel patterns for probationers/parolees: https://bi.com/products-and-services/analytics-offender-monitoring-data-statistics-behavior-tracking/

Predictive Policing

How do I learn more?

- Visit Human Rights Data Analysis Group: https://hrdag.org/policing/
- HRDAG article on bias: https://eff.org/PPHRDAG
- ACLU article on bias: https://eff.org/PPbias
- RAND research report advocating for PP: https://eff.org/PPRAND [contains rubrics for how law enforcement justifies and brands PP]

Stephanie Lacambra
Criminal Defense
Staff Attorney
415-436-9333 x130
stephanie@eff.org