

WINNING THE RAT RACE

WHERE ARE BOSTON'S RODENTS?

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PROBLEM STATEMENT

The City currently mitigates rodent activity in two ways:



Current operations are **BIASED** to locations that report more & might **MISS RODENT ACTIVITY**

→

OBJECTIVE:
Equitably predict and explain rodent activity across Boston

DATA

SPATIAL DATA

-  **ENVIRONMENT**
Parks, sewers, restaurants, trash pickup, sidewalks
-  **BUILDINGS**
Condition, age, material
-  **CENSUS DATA**
Population density

RODENT DATA

-  **311 REPORTS**
-  **VIOLATIONS**
-  **PROACTIVE BAITING**

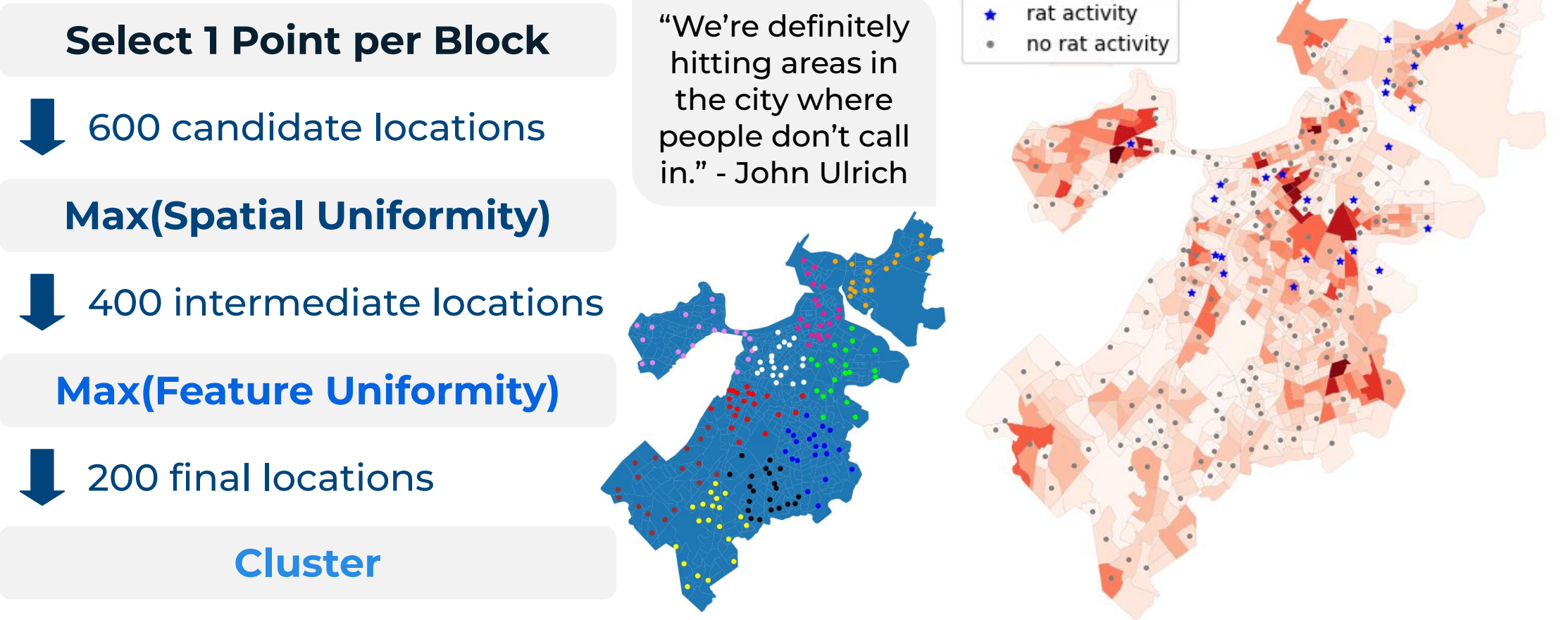
METHODOLOGY

SAMPLING

GOAL: Collect Ground Truth Data to Train and Validate

1) Find most informative locations

2) Collect data

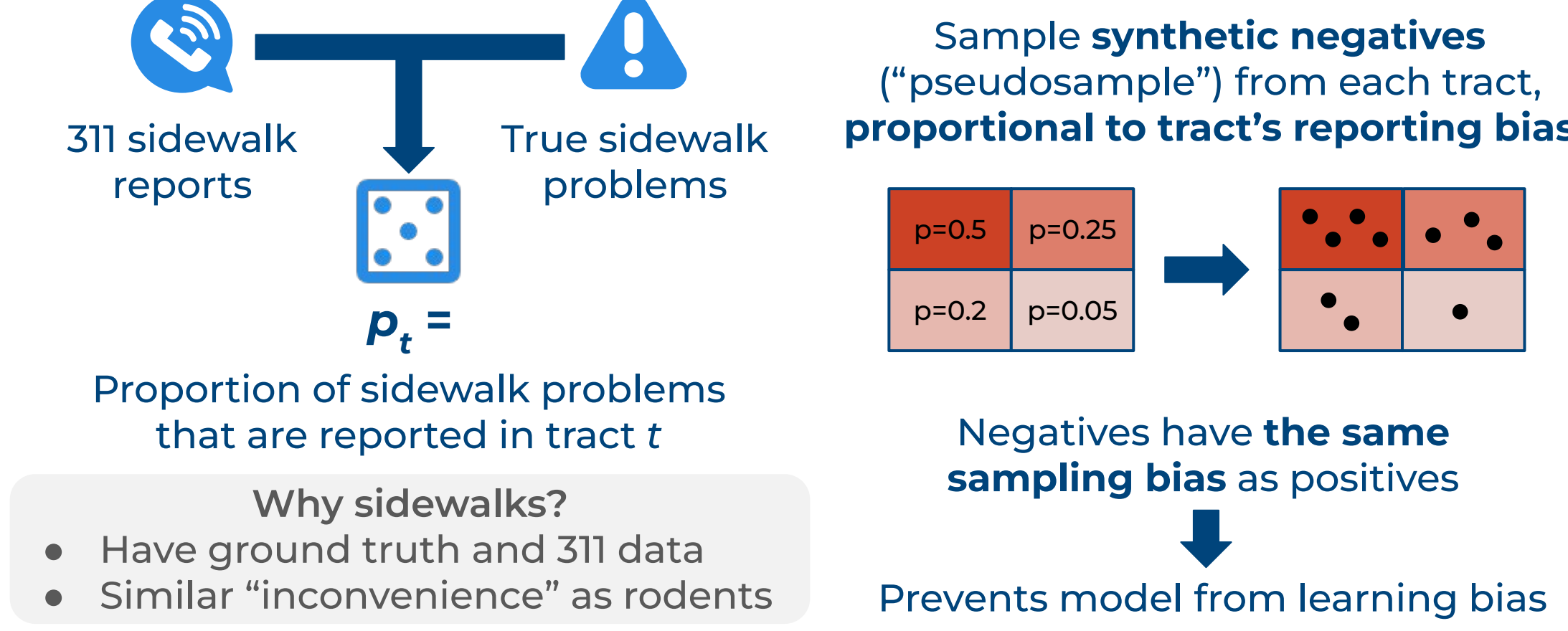


DEBIASING

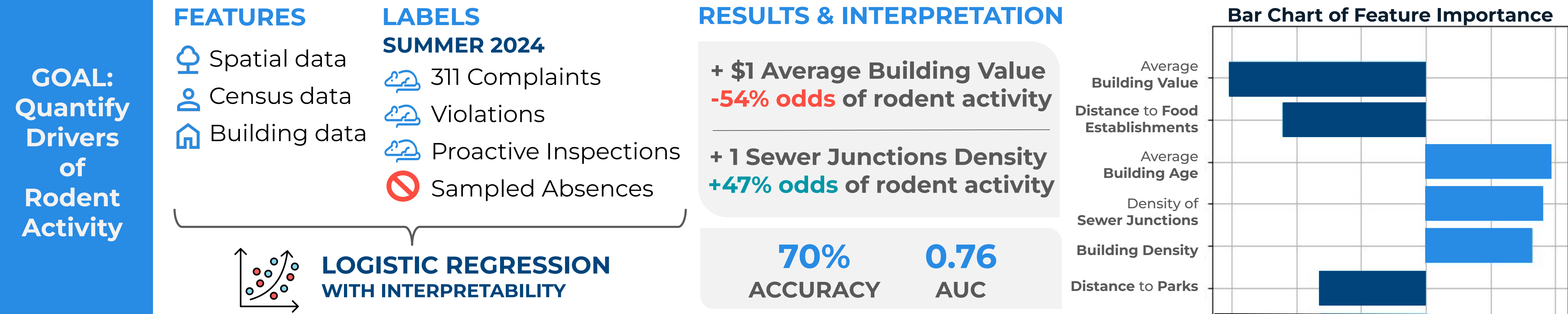
GOAL: Quantify and Offset Bias in 311 Complaints

1) Estimate Reporting Bias per Tract

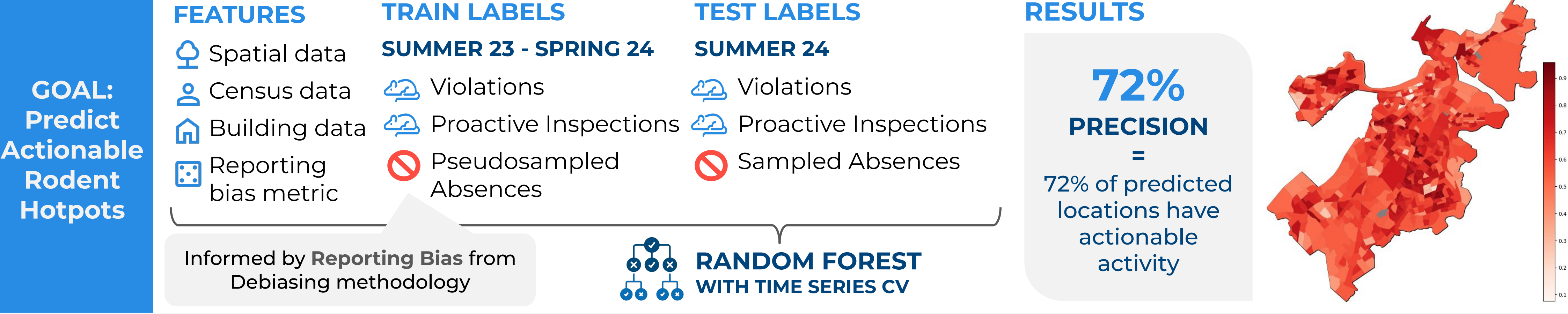
2) Pseudosample Negatives



GENERAL RODENT ACTIVITY MODEL



ACTIONABLE RODENT ACTIVITY MODEL



IMPACT

