

Team: Forest Flux

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## Research Questions

### **Research Question 1: Predicting Crime Reporting Delays in Los Angeles**

Our research will investigate the factors that cause the gap between when a crime occurs and when it is reported to the Los Angeles Police Department. Specifically, we want to understand which factors influence crime type, victim demographics, location, and timing predict whether someone reports a crime right away or waits days or even weeks to file a report, and whether these patterns are different for violent crime versus property crimes. We think this is an important question because when someone experiences a crime, their decision to report isn't random. It could be driven by fear, how serious they think the crime is, whether they trust the police, or just practical stuff like not knowing how to report or being too busy. Using regression analysis on LAPD crime data from 2020 to 2025 (about 1,000,000 rows and 28 columns), we can identify which factors most strongly predict reporting delays. Understanding these patterns helps the LAPD identify which communities or types of crime face barriers to timely reporting, which has real implications for how police build trust with different neighborhoods, allocate resources, and ensure everyone has equal access to police services regardless of where they live or who they are.

### **Research Question 2: Predicting Crime Hotspot Intensity Across Los Angeles**

Our research will investigate why some Los Angeles neighborhoods feel unsafe while others don't. We want to know what factors predict where and when crime concentrates most intensely across the city. We want to understand how time patterns (rush hour vs. late night, weekdays vs. weekends, summer vs. winter), the mix of different crime types, the places where crimes happen (streets, parking lots, homes), and past crime history predict whether an area becomes a crime hotspot, or if it's safer than surrounding neighborhoods. We think this is crucial because every Angeleno deserves to feel safe in their own neighborhood, yet some communities live with constant anxiety about crime, while others rarely think about it. This inequality isn't fair, and it's not inevitable. Using regression analysis on LAPD crime data from 2020 to 2025, we will group the 1,000,000 rows and 28 columns by area and time. Doing this will allow us to pinpoint exactly what makes certain places and times so vulnerable to crime. Understanding these patterns means the LAPD can actually protect the communities that need it most, putting officers

where they'll make the biggest difference, working with neighborhoods to fix dangerous conditions, and giving families in high-crime areas the same peace of mind that people in safer neighborhoods take for granted.

### **Research Question 3: Predicting Victim Age Patterns in Los Angeles Crime**

Our research will examine who is harmed by crime in Los Angeles. We will investigate factors that predict whether victims are children, young adults, middle-aged people, or seniors, and whether certain crimes deliberately target the most vulnerable among us. We want to understand how the type of crime, where it happens, what time it occurs, and whether weapons are involved, predict the age of victims, and whether some age groups face dangers that others don't even think about. We think this matters deeply because a grandmother getting robbed, a teenager getting assaulted, and a young parent getting their car stolen are all tragedies, but they're different kinds of tragedies that need different solutions. Elderly people might live in fear of scams or being attacked because they can't fight back. Young people might not realize they're walking into danger in certain neighborhoods or at certain times. Kids depend on adults to keep them safe, but sometimes fall through the cracks. Using regression analysis on LAPD crime data from 2020 to 2025 (about 1,000,000 rows and 28 columns, including victim ages), we can identify which groups are most at risk of which crimes and why. Understanding these patterns means the LAPD can actually protect people based on their real vulnerabilities, warning seniors about the specific threats they face, teaching young adults how to stay safe, and making sure kids have safe routes to school.