



WE'RE HELPING BATMAN IN HIS NEW MISSION

- Batman moved to Boston and needs our help to spot crimes in the area.
- He needs to know several types of uncivil activities happening in the city: crimes, offences and infractions (UCR type One, Two and Three).
- We built him a dashboard, an interactive map of crime and predicted crimes in the city.

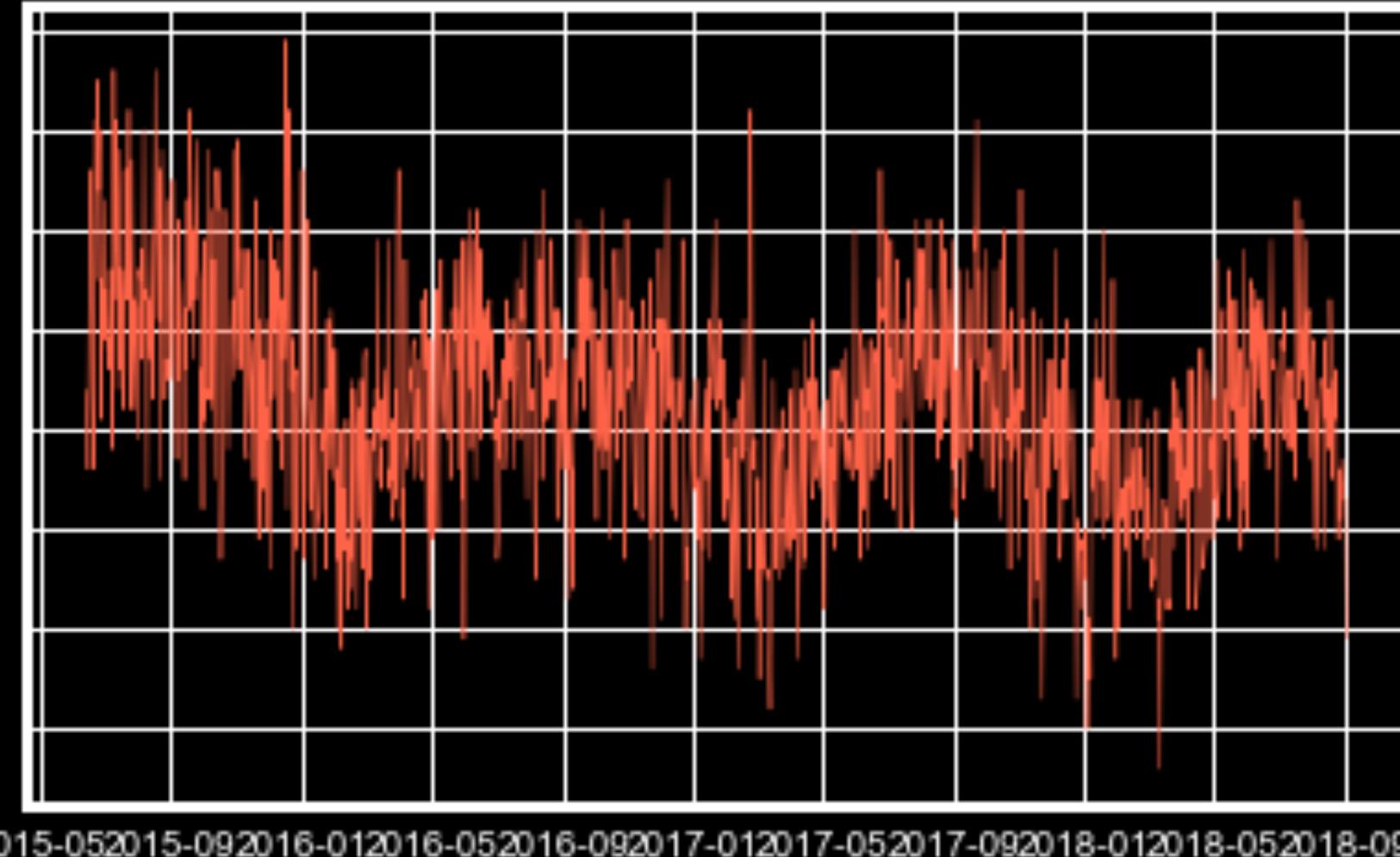


CRIMES IN BOSTON



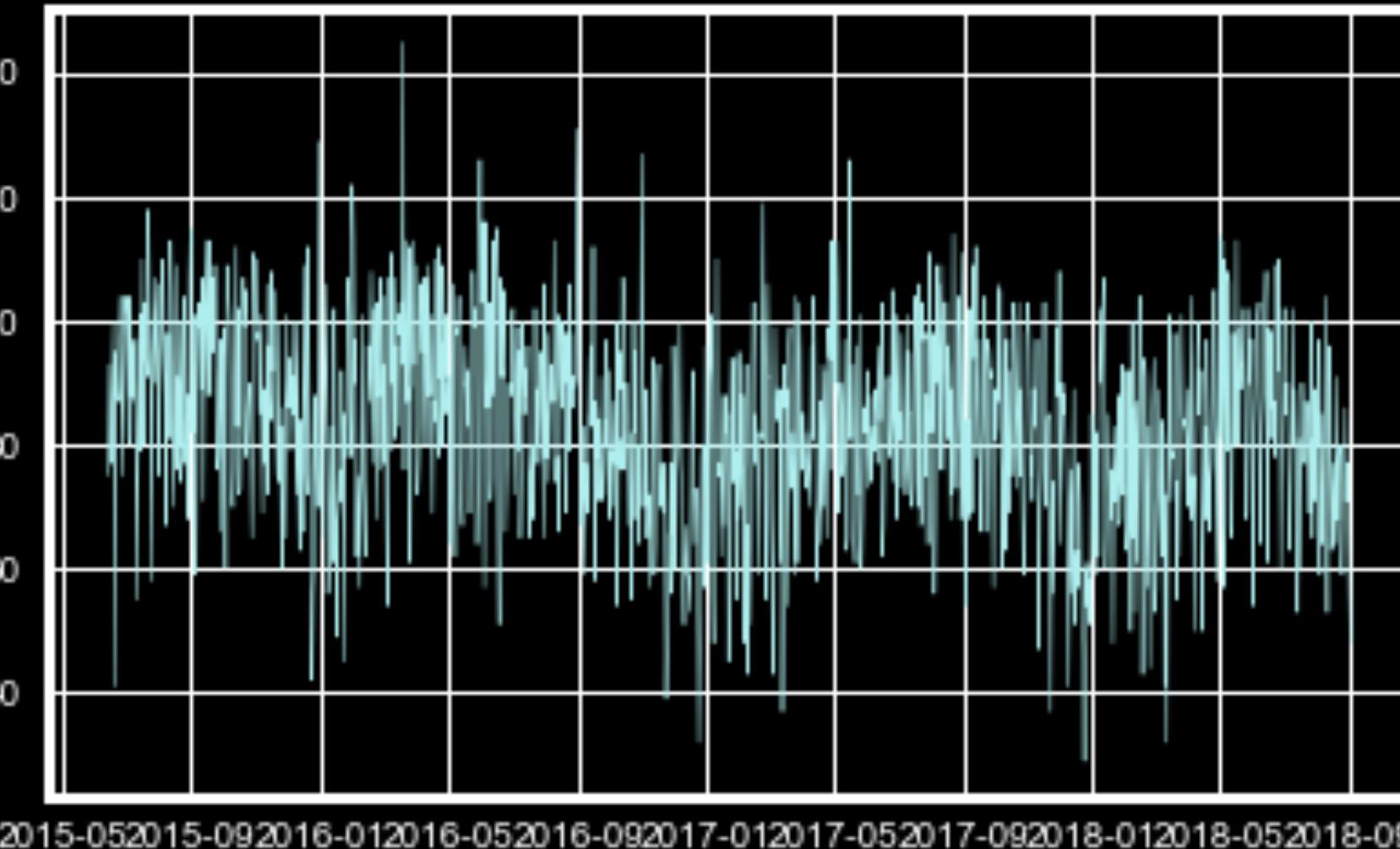
CRIMES IN BOSTON

UCR Type 1 Crimes



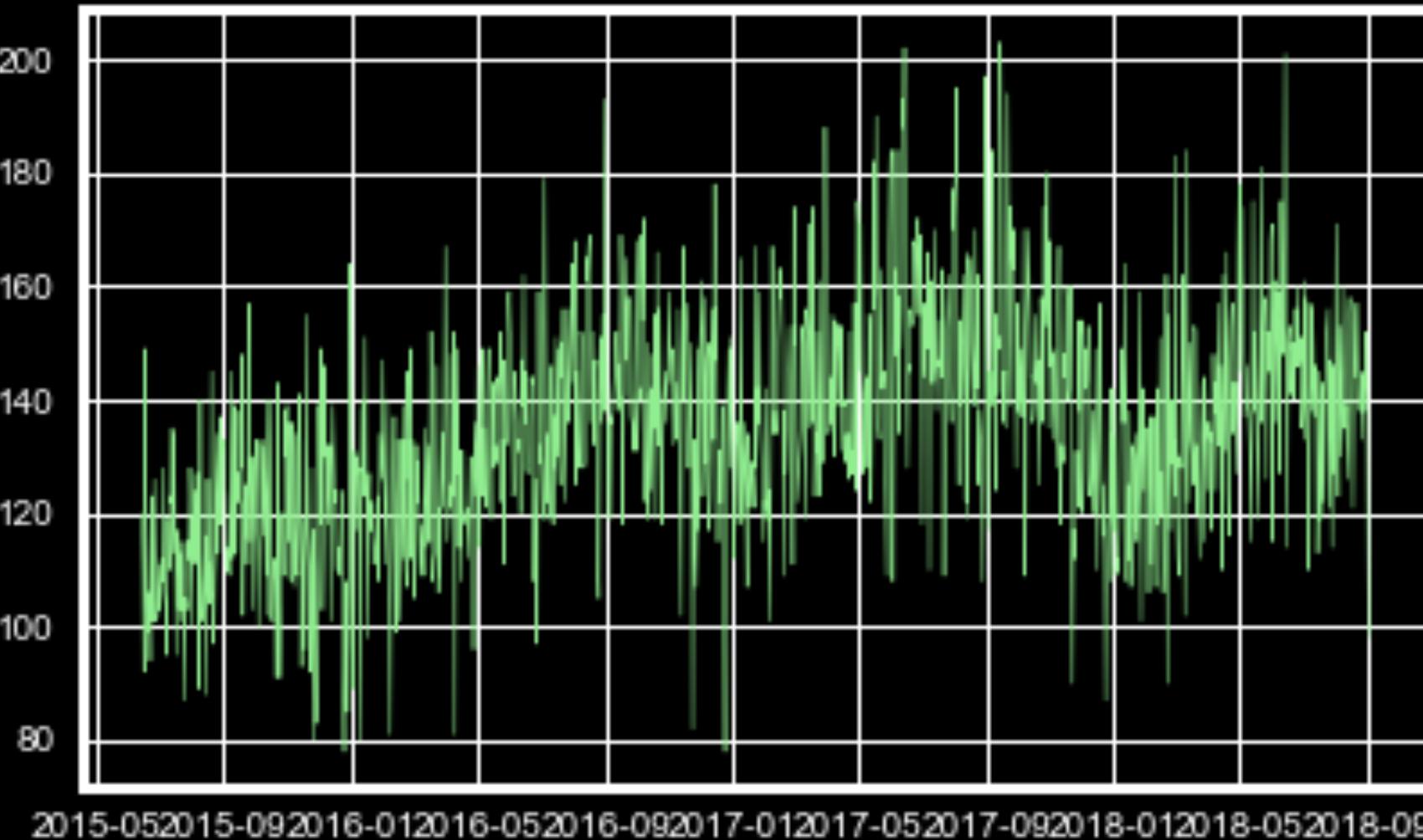
OFFENSES IN BOSTON

UCR Type 2 Crimes

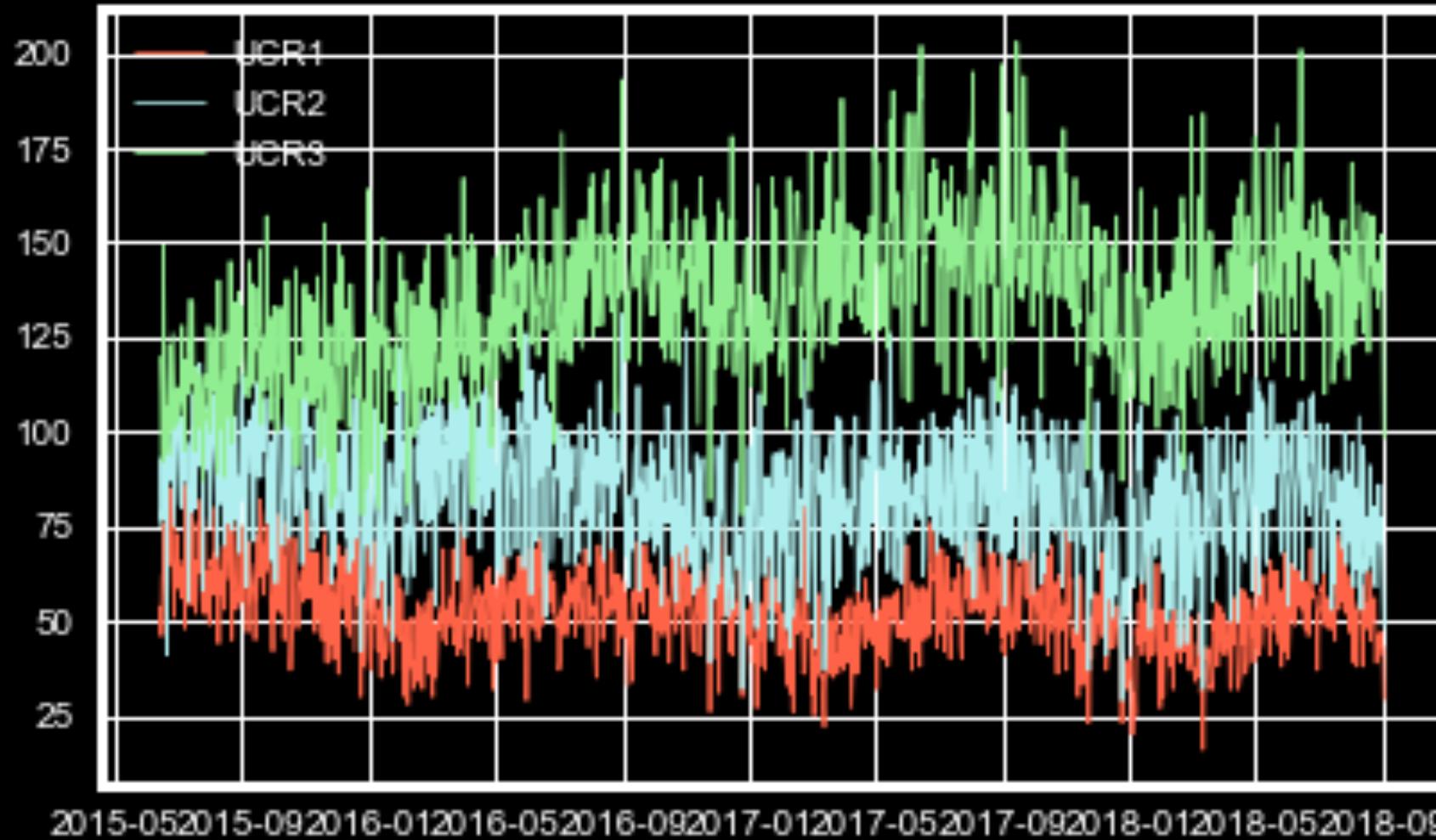


INFRACTIONS IN BOSTON

UCR Type 3 Crimes

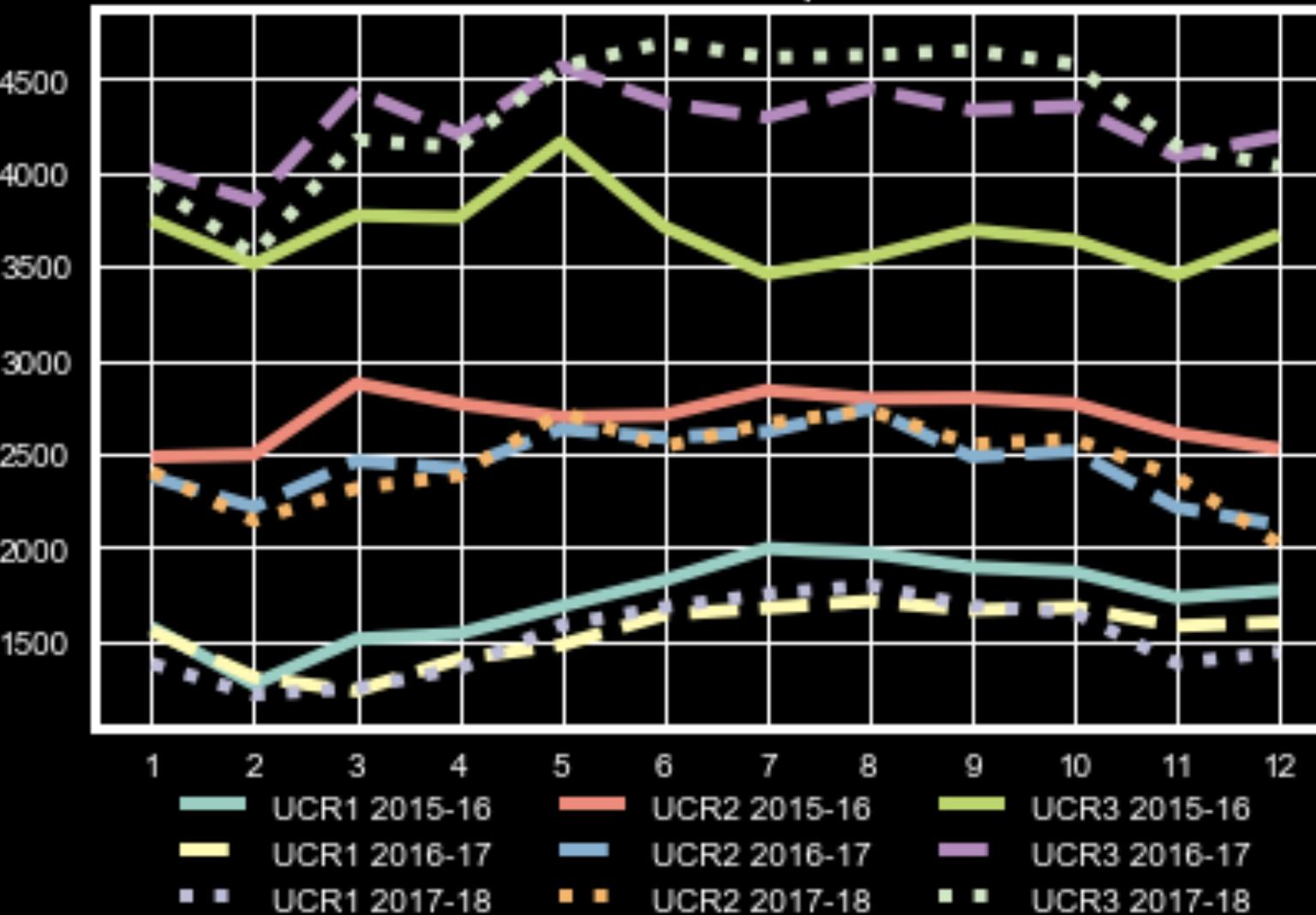


EVOLUTION OF CRIMES IN BOSTON



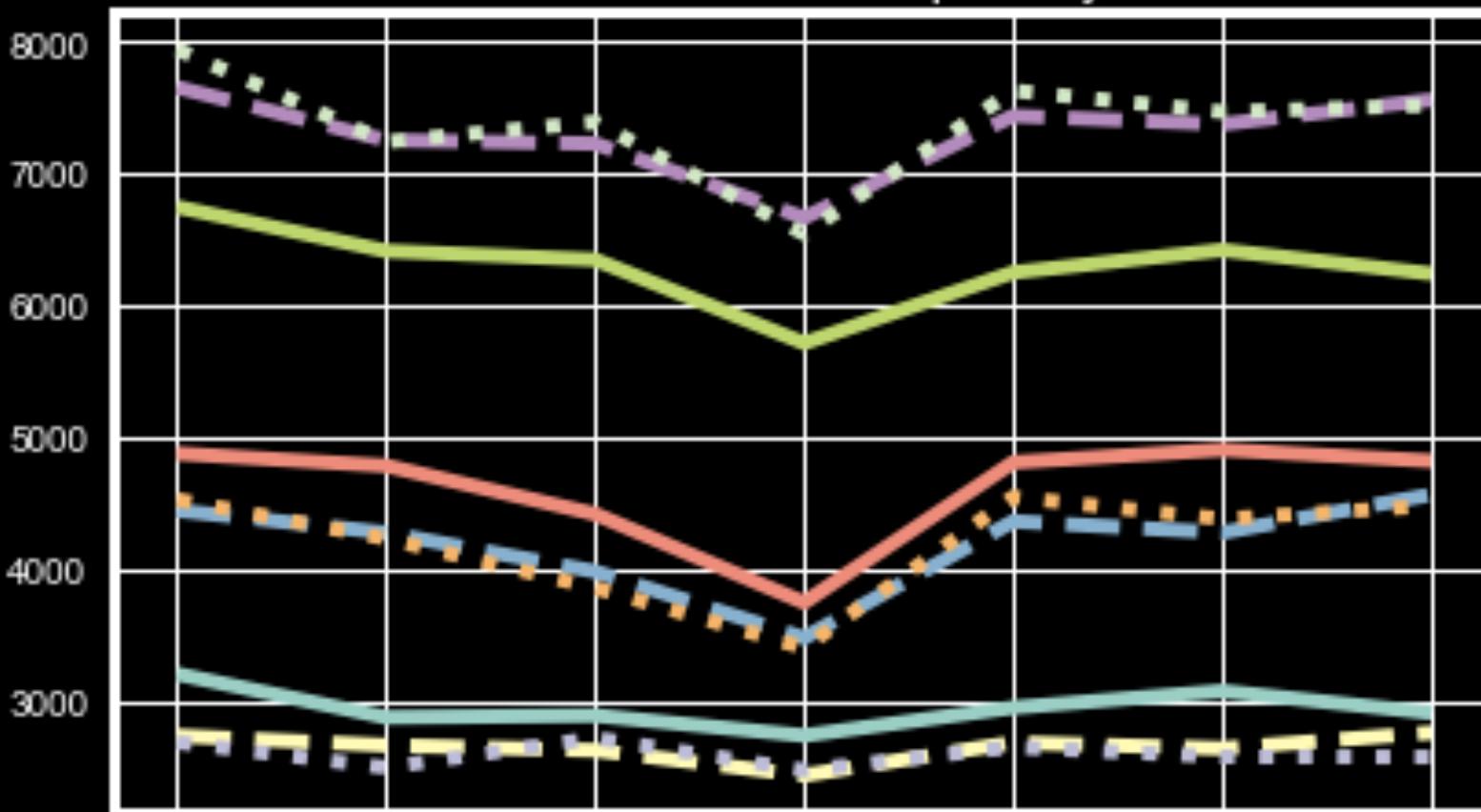
PATTERNS THROUGHOUT THE YEAR

Number of crimes per month



PATTERNS OVER THE WEEK

Number of crimes per day



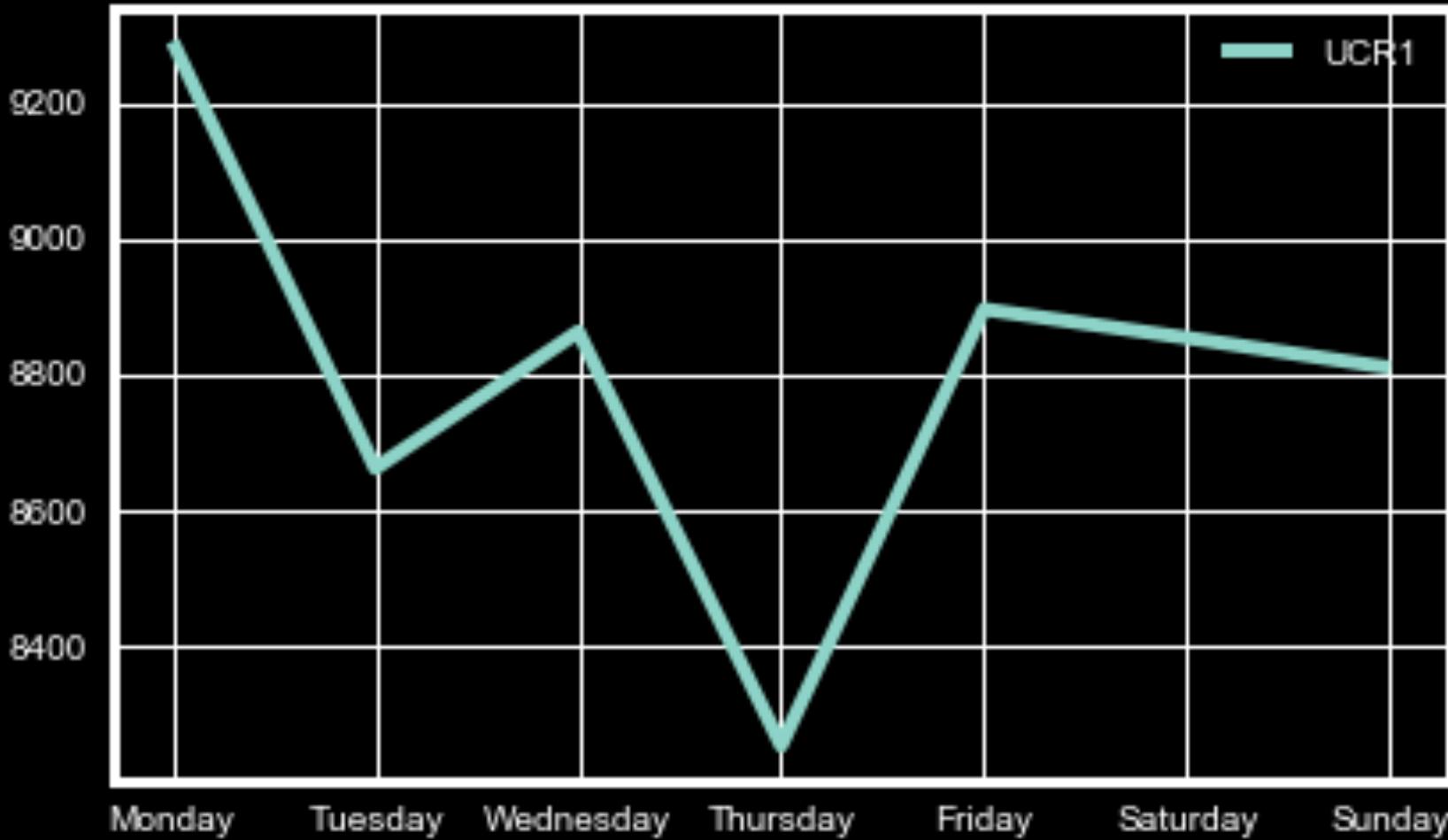
Monday Tuesday Wednesday Thursday Friday Saturday Sunday

UCR1 2015-16	UCR2 2015-16	UCR3 2015-16
UCR1 2016-17	UCR2 2016-17	UCR3 2016-17
UCR1 2017-18	UCR2 2017-18	UCR3 2017-18



FOCUS ON UCR TYPE I: CRIMES

Aggregated UCR1 crimes by day



**CRIMES
GEOSPATIAL
LOCALISATION**





Belmont

Weekly Type I Crimes in Boston Area

GEOSPATIAL VISUALIZATION WITH INTERACTIVE MAPS

Larceny From Motor Vehicle

Mouse
sensitive



BRIDGEPORT



GEOSPATIAL VISUALIZATION WITH INTERACTIVE MAPS

Charles River

Weekly Type II Crimes in Boston Area

Crime Info

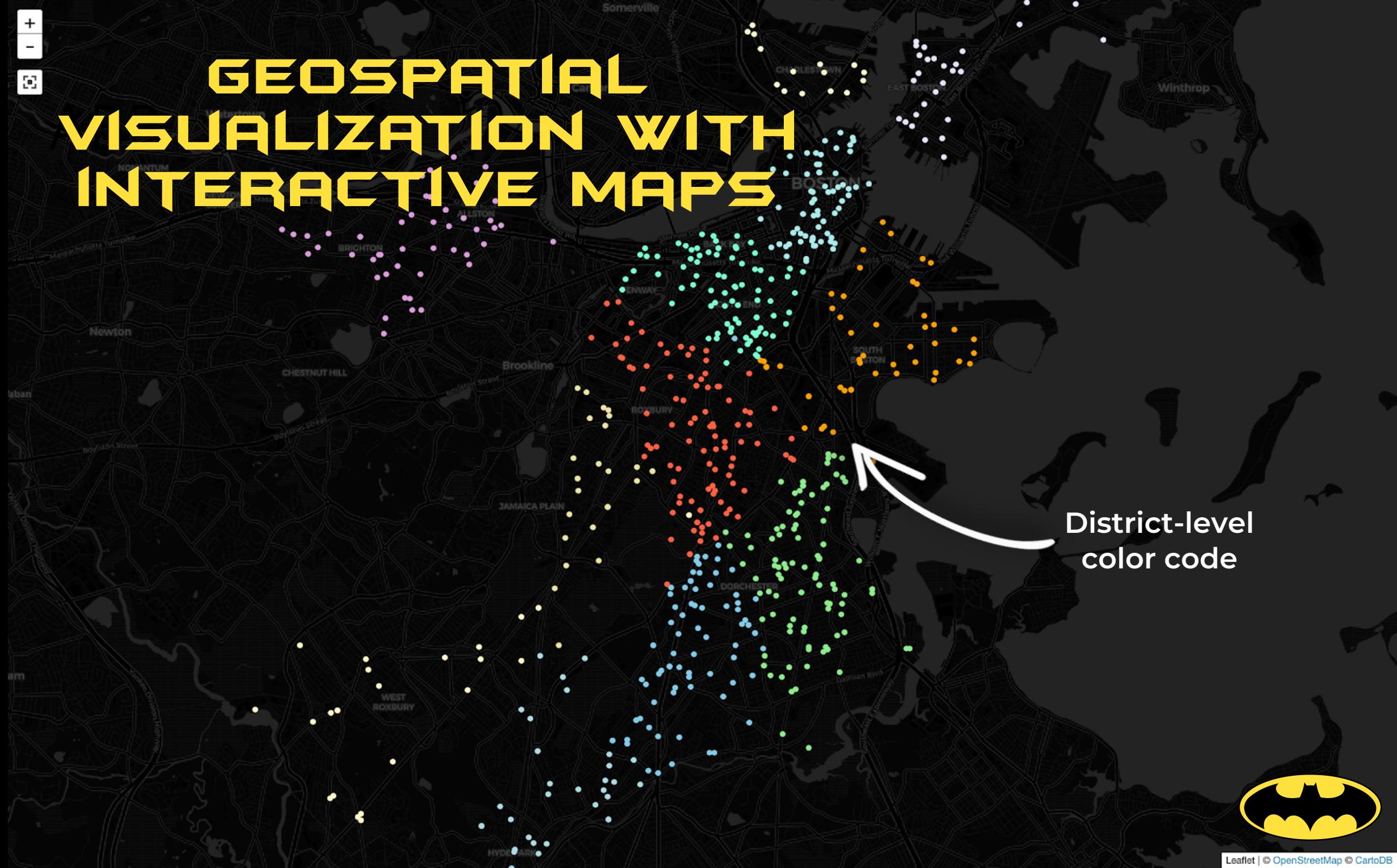
['Vandalism', '2015-07-
25 15:44:00', 'D4']

Crime info
pop-up

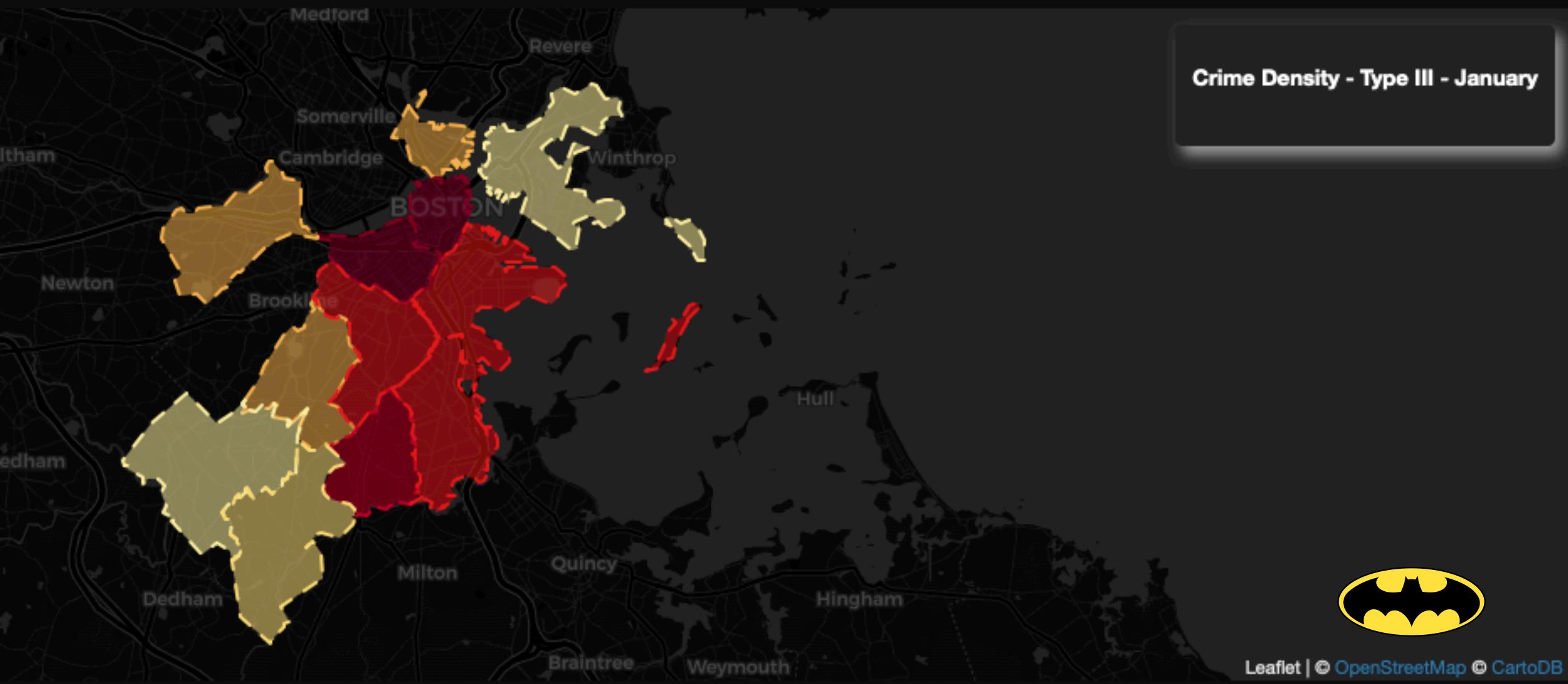




GEOSPATIAL VISUALIZATION WITH INTERACTIVE MAPS



AGGREGATED VISUALIZATION: CRIME DENSITY PER DISTRICT



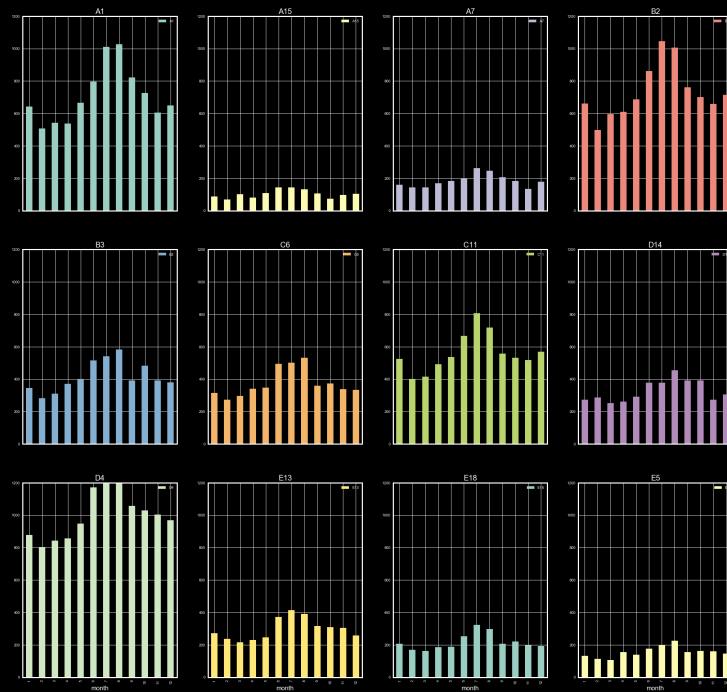
CRIMES SEASONALITY



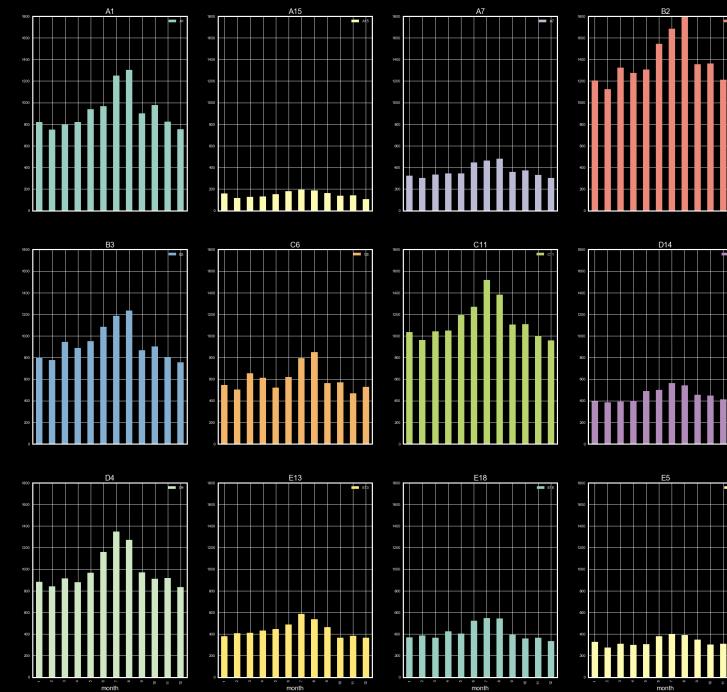
DISTRICT-LEVEL MONTHLY DISTRIBUTION BY CRIME TYPE

District-level color code
(same as in maps)

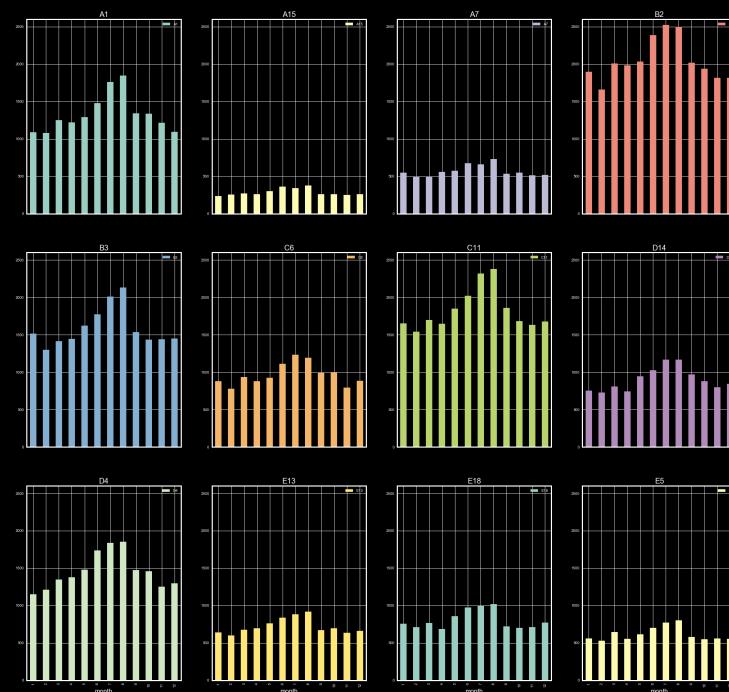
UCR Part one



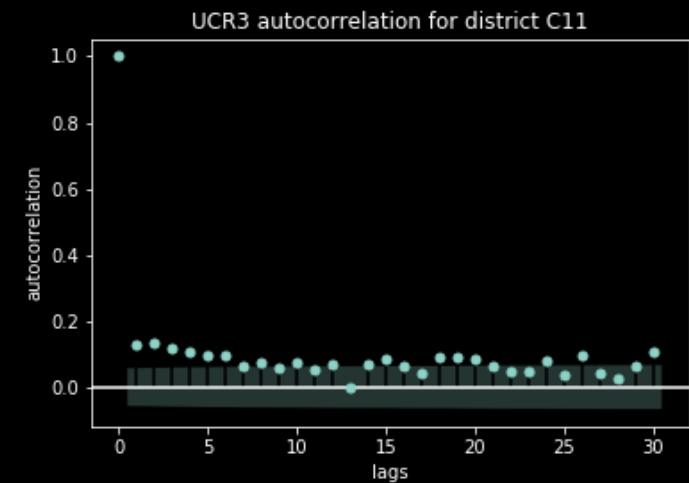
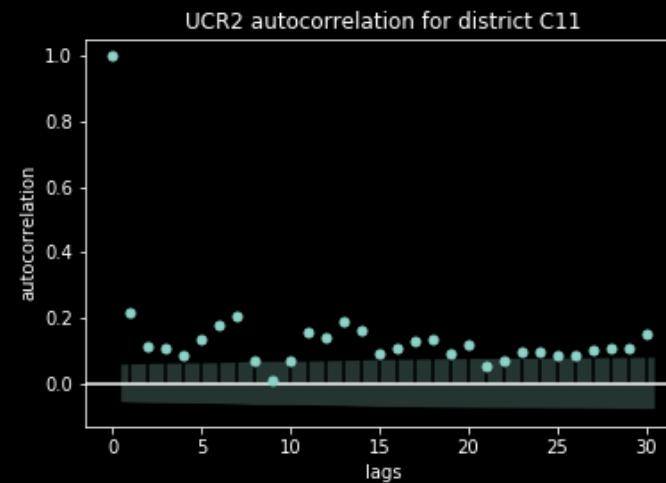
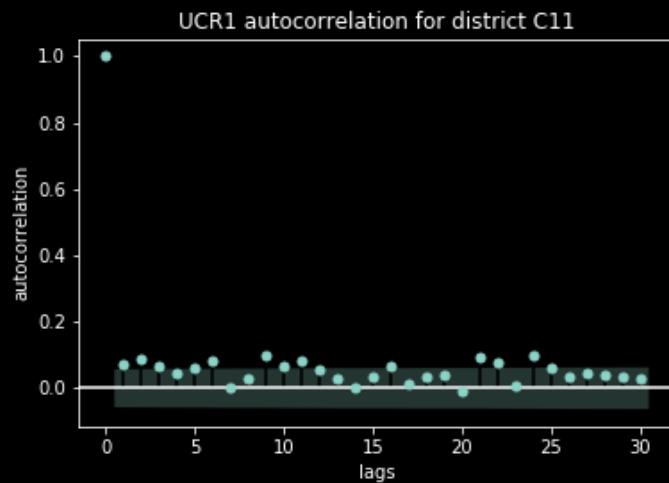
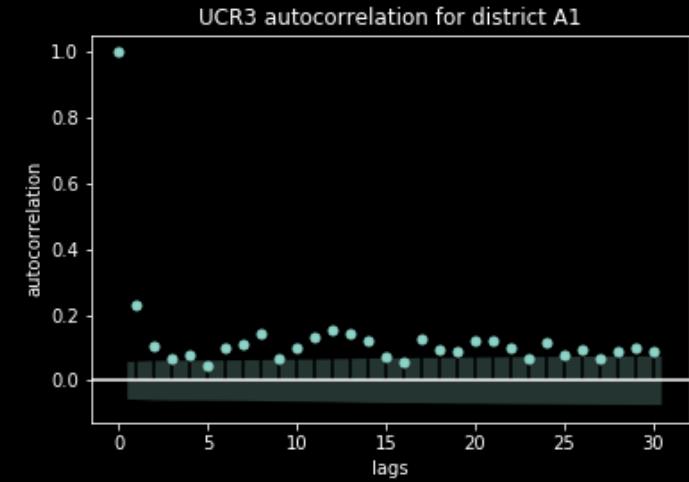
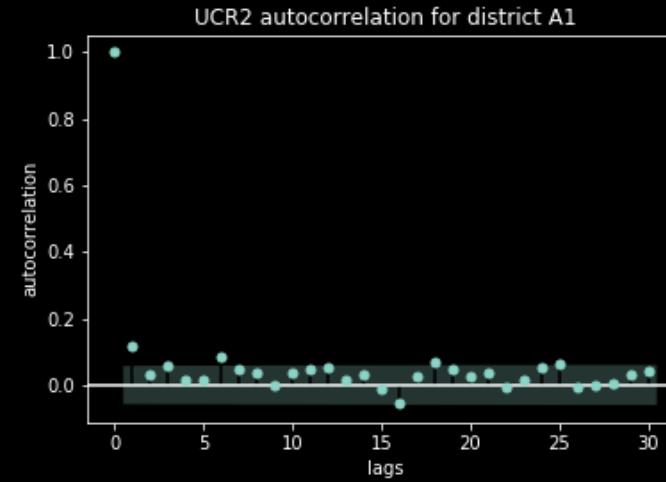
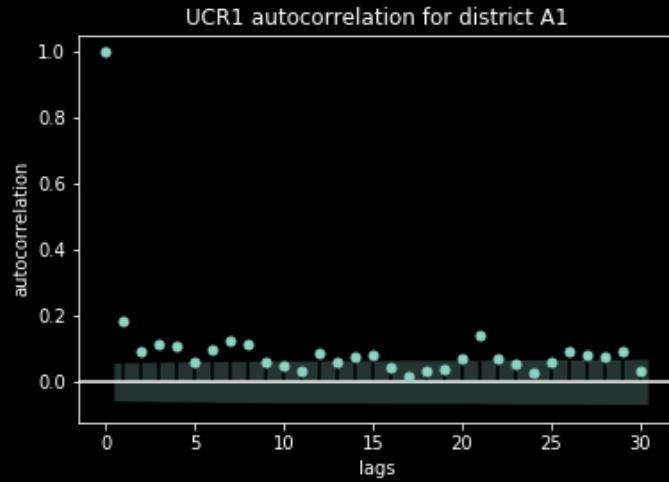
UCR Part Two



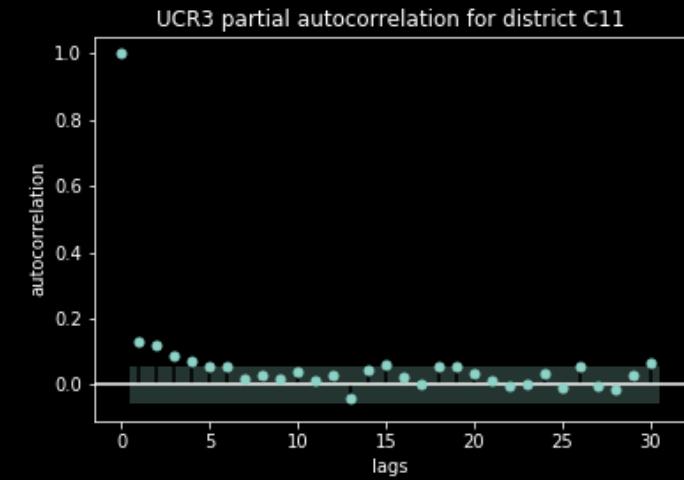
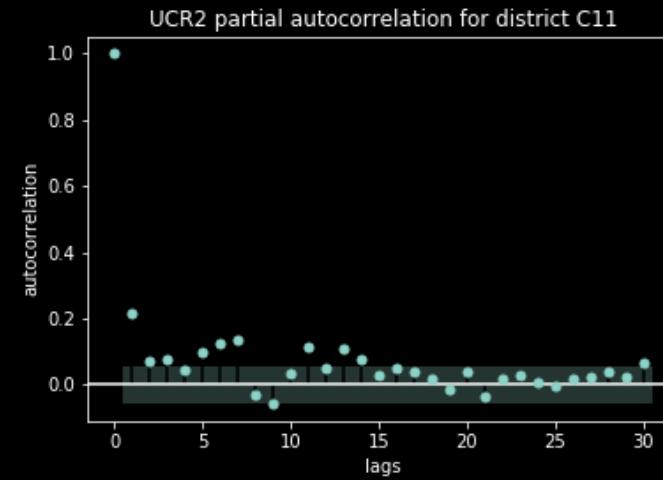
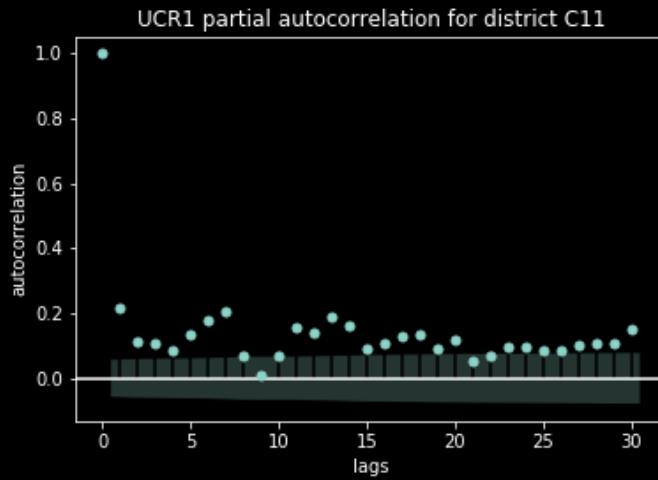
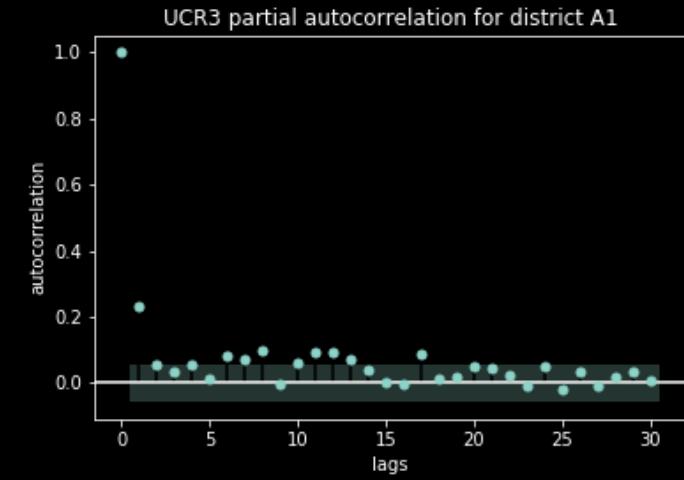
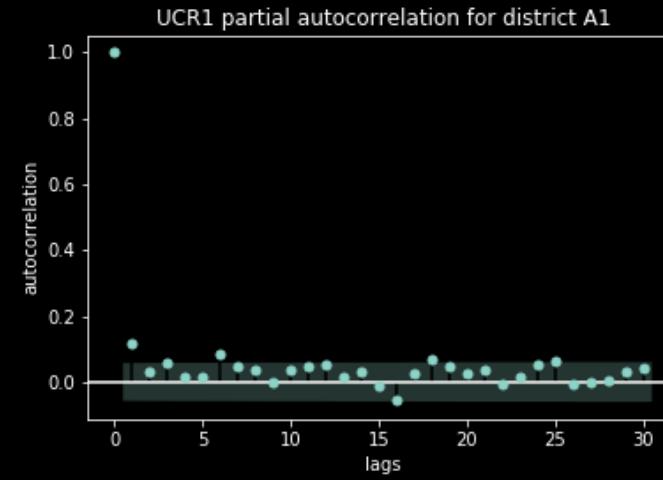
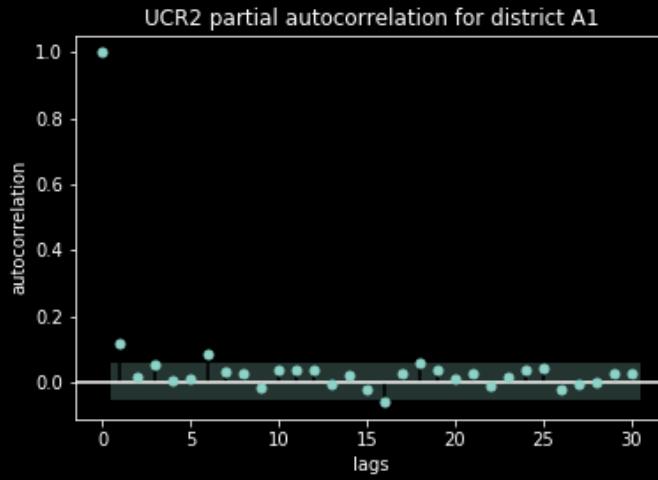
UCR Part Three



2 MAIN ACF PROFILES



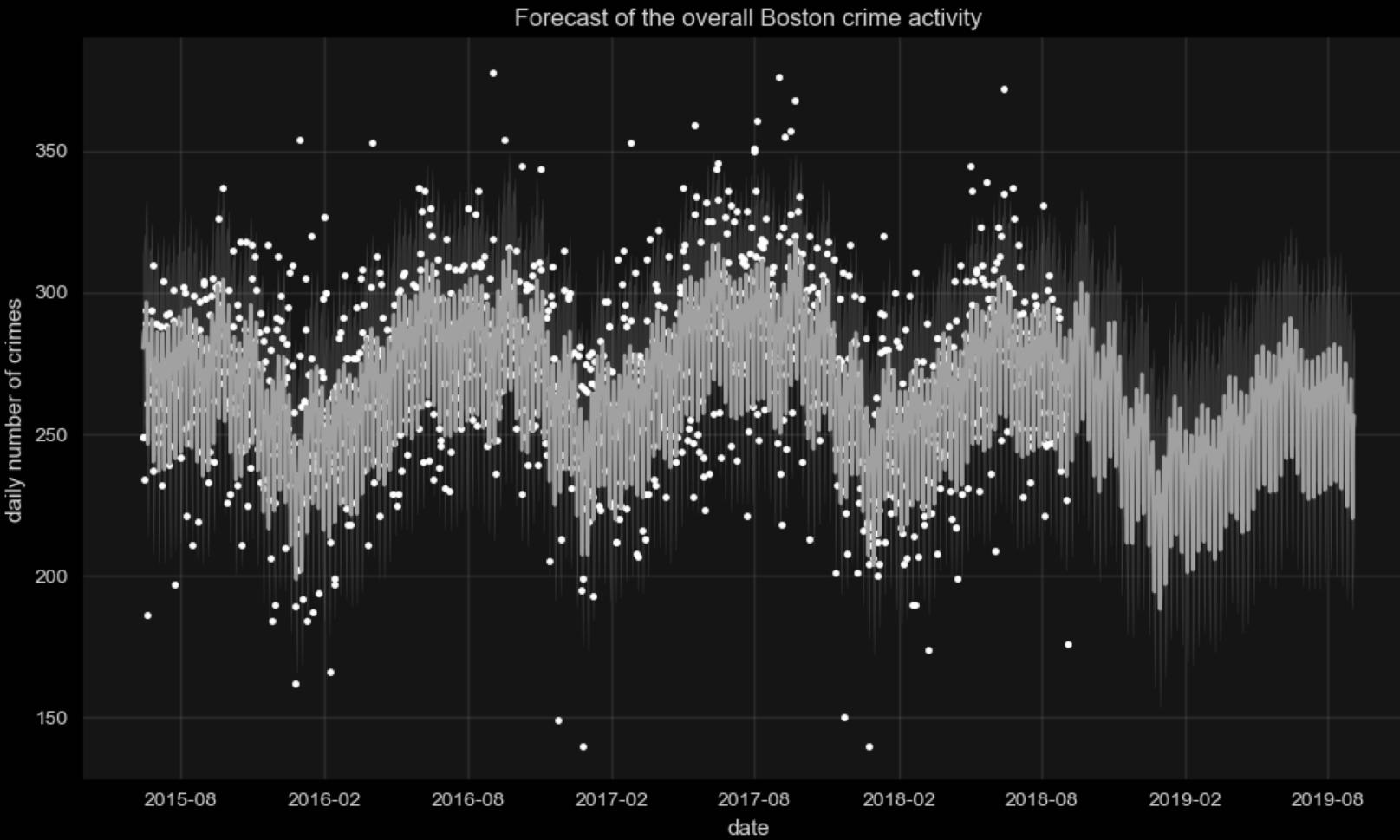
2 MAIN PACF PROFILES



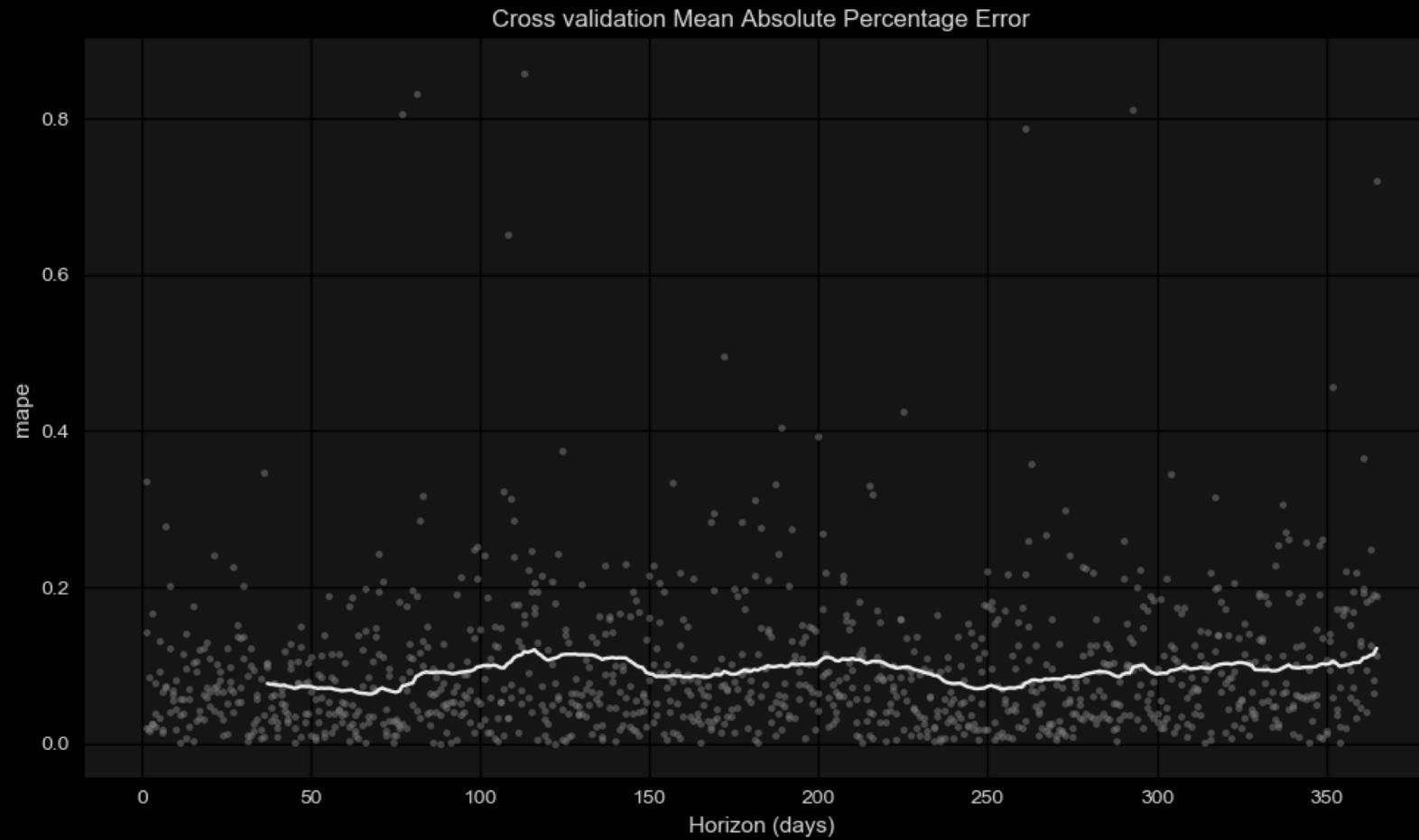
CRIMES FORECASTING



CRIME FORECASTING FOR POLICE ALLOCATION



CROSS VALIDATION RESULTS

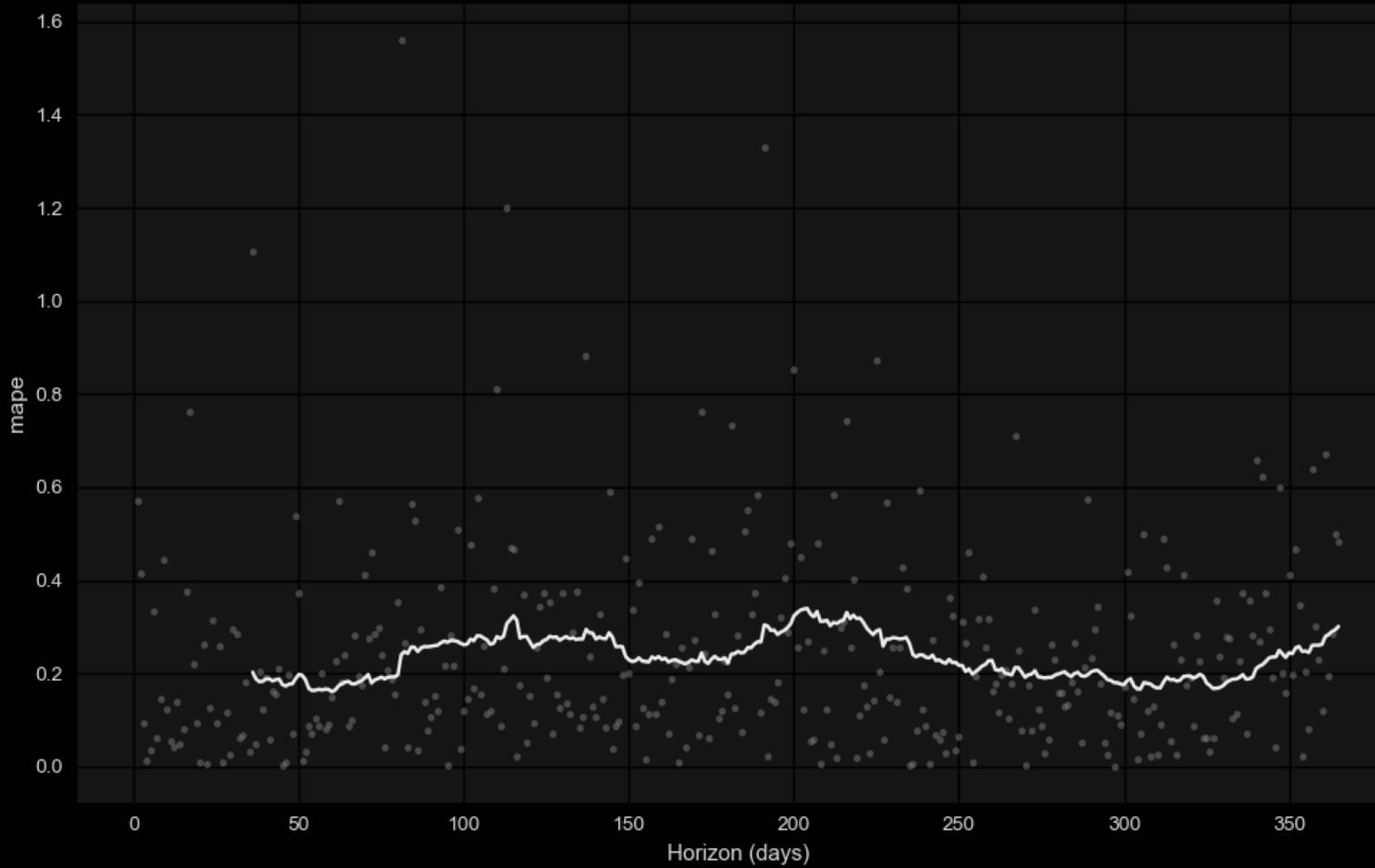


10% mean
percentage error

CRIME FORECASTING IN THE HOTTEST NEIGHBORHOOD



LESS PREDICTIVE POWER WITH GRANULARITY



20% MAPE

VISUALIZING TOMORROW'S CRIMES ON THE MAP

