

2025 CHICAGO CRIME ANALYSIS



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AGENDA

Data Specification and Originality

Data Analysis using ES

Predictive Analysis using ML

Q&A



DATA SPECIFICATION

Filtered data from 2 GB by specifying data and columns

Data size: 21.5mb

Data source: [Crimes - 2001 to Present | City of Chicago | Data Portal](#)

Abstract: This study investigates reported crime occurrences in Chicago from January to November 2025—excluding the most recent seven days—using Elasticsearch and Kibana. The analysis examines how the frequency of various crime categories has changed throughout the year, exploring crime types, geographic distribution, and monthly patterns



HW EXPERIMENT SPECIFICATIONS

- Filtered our data from January 2025 – November 2025.
- Removed unnecessary columns such as:
ward, beat, block, FBI code, community area, district, and case number
- Used the columns leftover, which were: Id, date, primary type, description, latitude, longitude, and location.

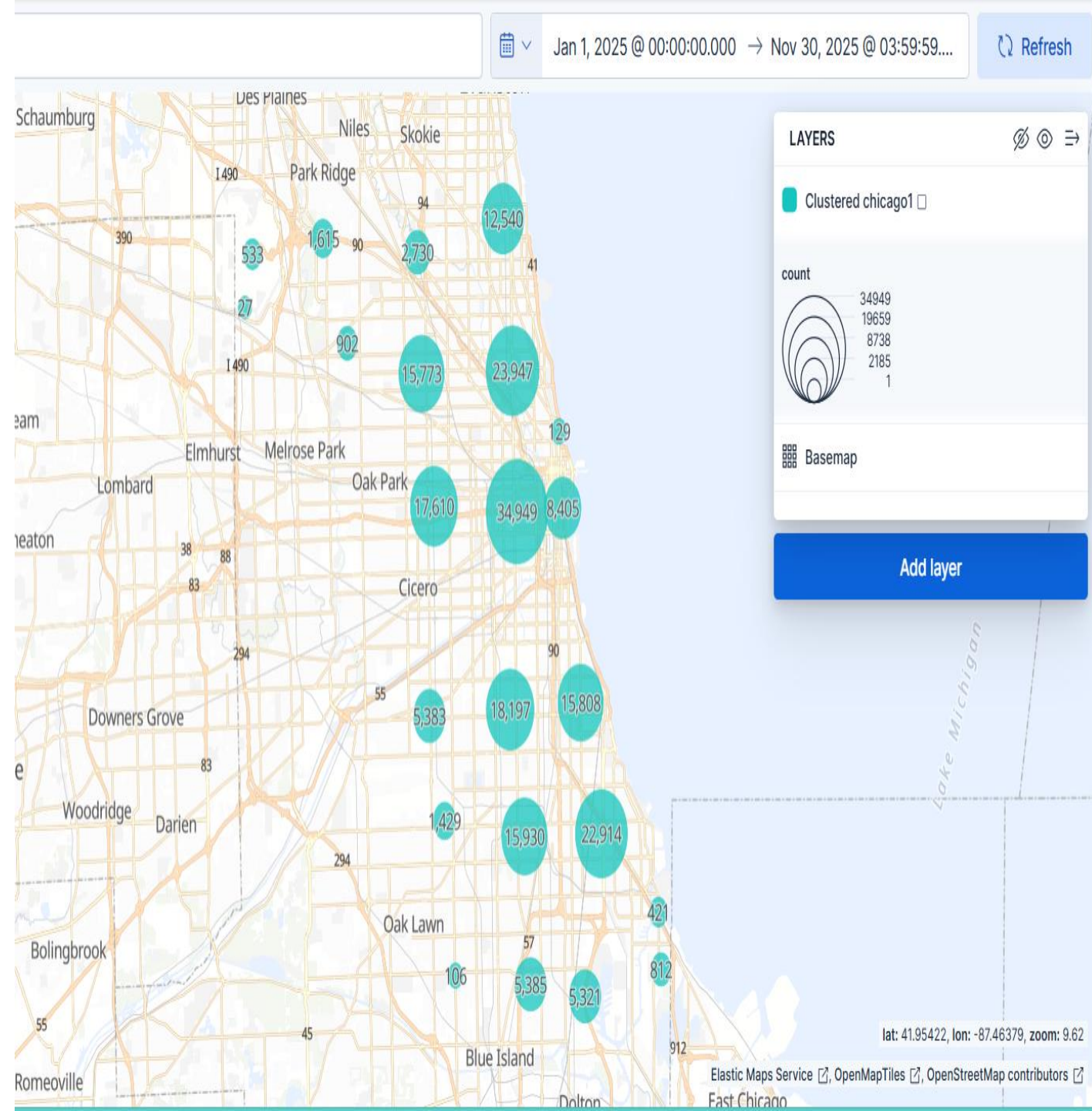


ORIGINALITY

- This project narrows the focus to **Jan–No, 2025** to detect recent, relevant changes.
- We deliver actionable, up-to-the-minute insights rather than retrospective summaries, enabling tactical responses.
- Detect most relevant crimes of up to recent dates that may affect people more than past data.

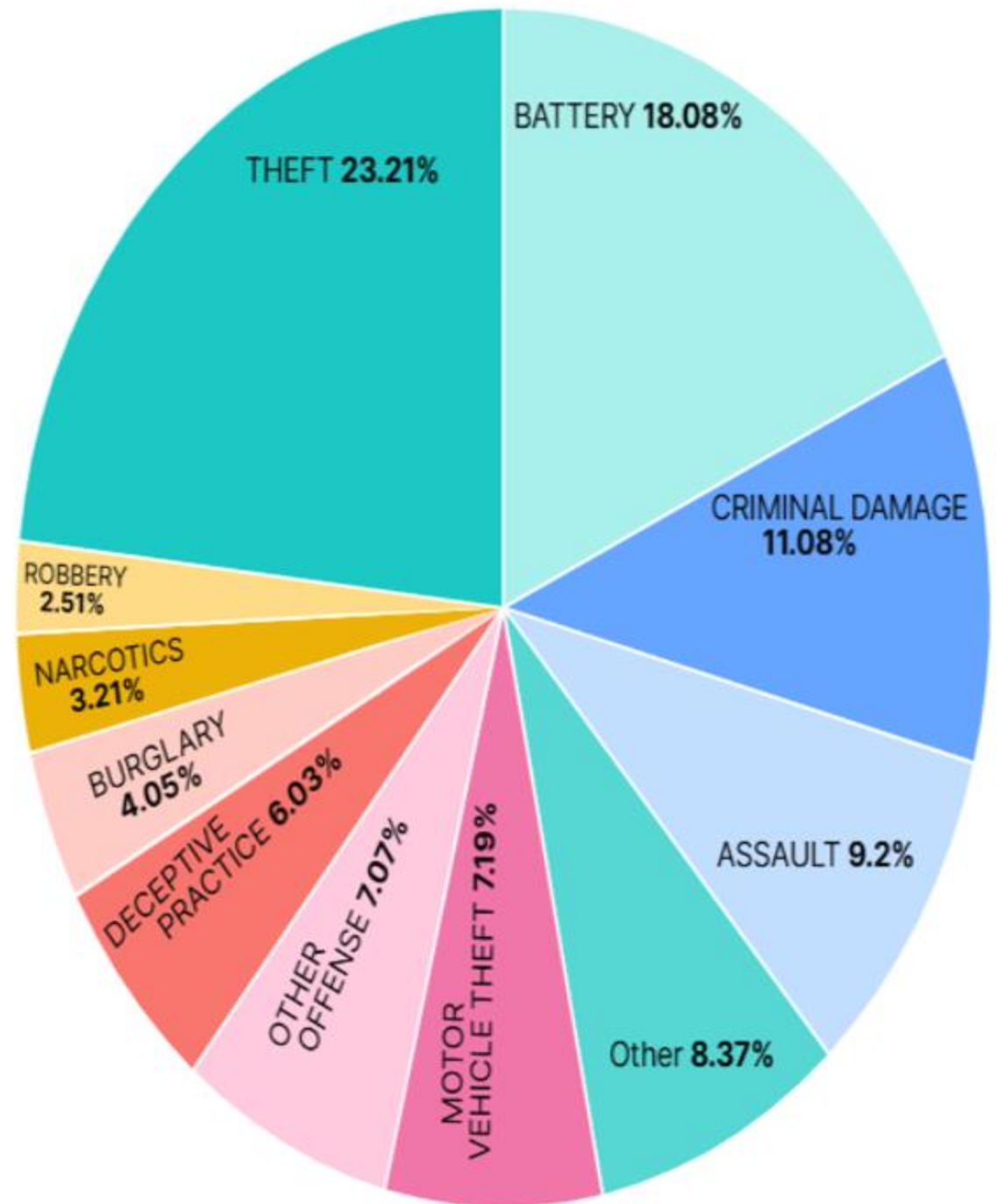
DATA ANALYSIS USING ES

Cluster of the
most committed
crimes
throughout
Chicago
from Jan 2025
to Nov 2025.



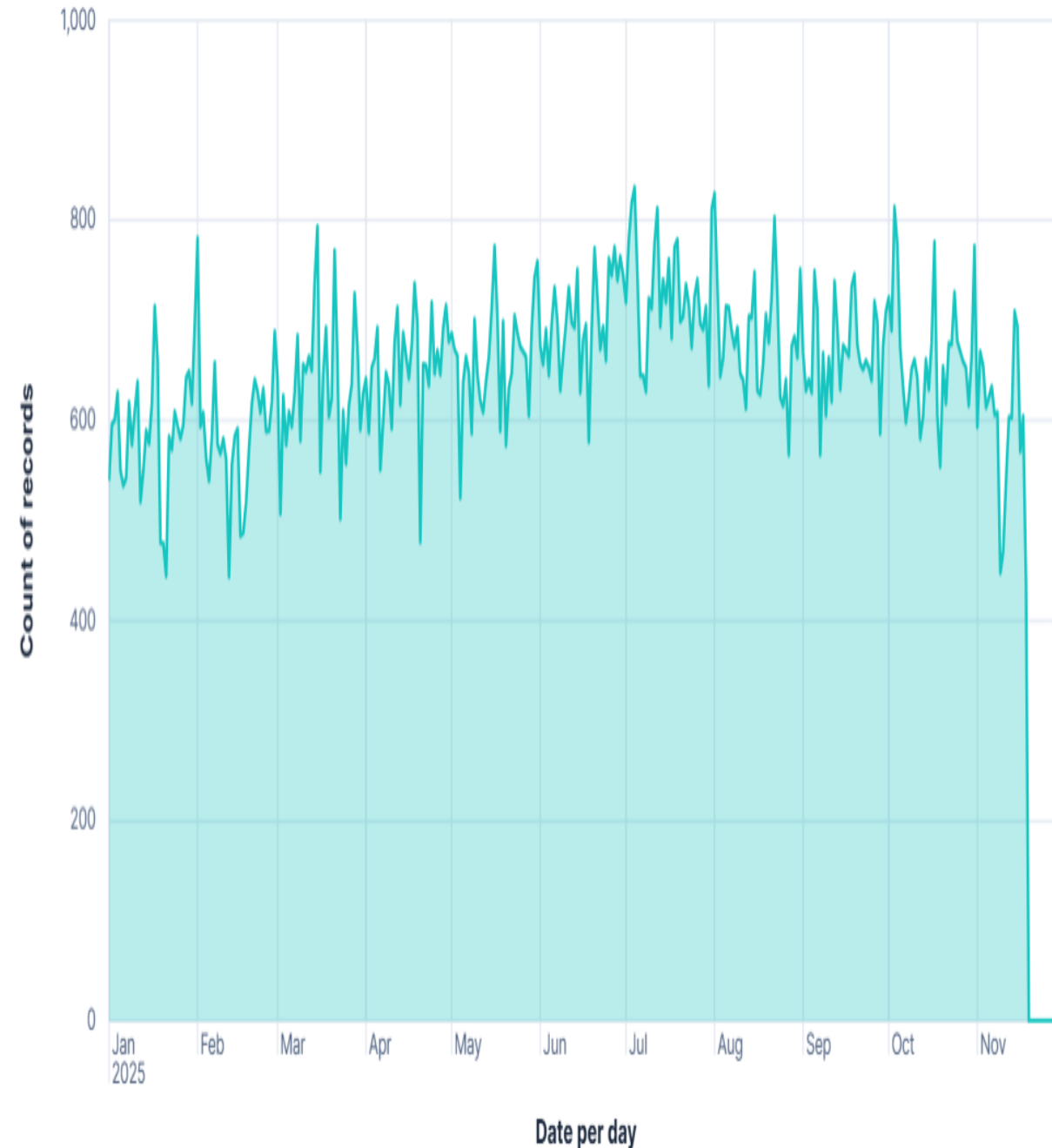
DATA ANALYSIS USING ES

Using a pie chart, we can compare the top 10 crimes in Chicago from January 2025 to November 2025. The percentile gives us a clear comparison of the number of crimes committed.



DATA ANALYSIS USING ES

Area chart to show the difference between the amount of crime per day from January 2025 to November 2025.



PREDICTIVE ANALYSIS USING MACHINE LEARNING



PREDICTIVE ANALYSIS USING MACHINE LEARNING

Evaluation quality metrics

0.864

Overall accuracy (?)

0.573

Mean recall (?)

Accuracy of the Crime Prediction and Total Feature Importance.



Q&A



THANK YOU

