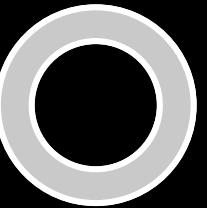




CRIMES IN CHICAGO

Data-driven insights to optimize arrest rates
and increase public safety.



➤ MEET THE TEAM



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Health Claims Adjuster

Integrated Master ,Department Of
Informatics and Computer Engineering,
University of West Attica



▪ **Athanasios Sakatziadis**

Air Logistics Specialist

Master's Student in Business Analytics &
Data Science , UOM

BSc, Business Administration,
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▪ **Evangelia Katsanou**

Health Claims Adjuster

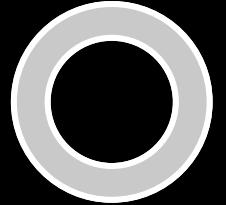
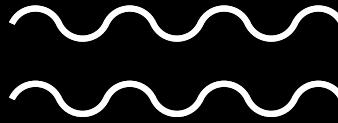
BSc, Business Administration and
Management,
University of Piraeus

OUR MISSION

- Deliver a **data-driven analysis of city crime patterns** across key crime types.
- The objective is to uncover **actionable insights** that enable the authorities to **anticipate, prevent, and respond to crime more effectively**
- **Contribute to making Chicago's streets safer for everyone** through informed, proactive decision-making.



Data Set ,Timeline & Tools



- ✓ Data source: <https://www.kaggle.com/datasets/utkarshx27/crimes-2001-to-present/data>

Analyzed 7.7M rows to identify missing values, and filter

Uncovering patterns and aggregating data for next steps

Built interactive dashboards to facilitate granular data exploitation and spatial analysis

Developed a custom app, allowing stakeholders to test hypotheses

Finalized a strategic roadmap that converts crime patterns into high-impact insights

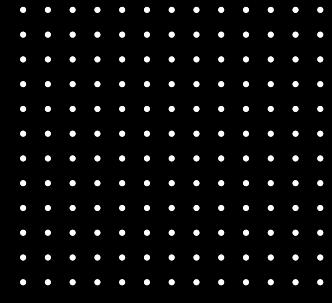
CLEANING

EDA WITH PANDAS

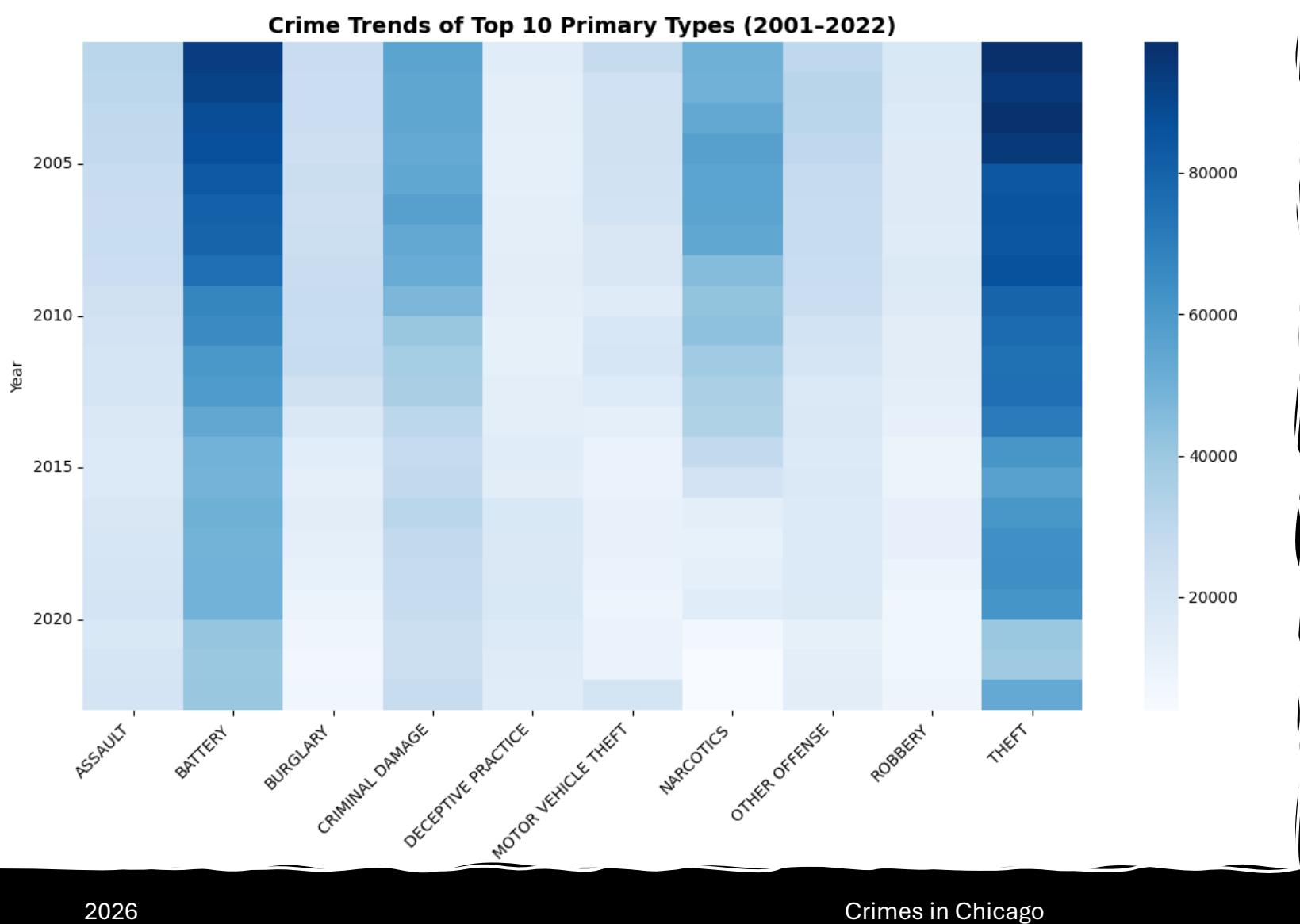
POWER BI

STREAMLIT

INSIGHTS



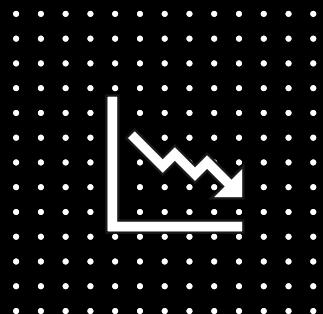
VOLUMES TIMELINE



- Theft and Battery are the most prevalent crime types in Chicago

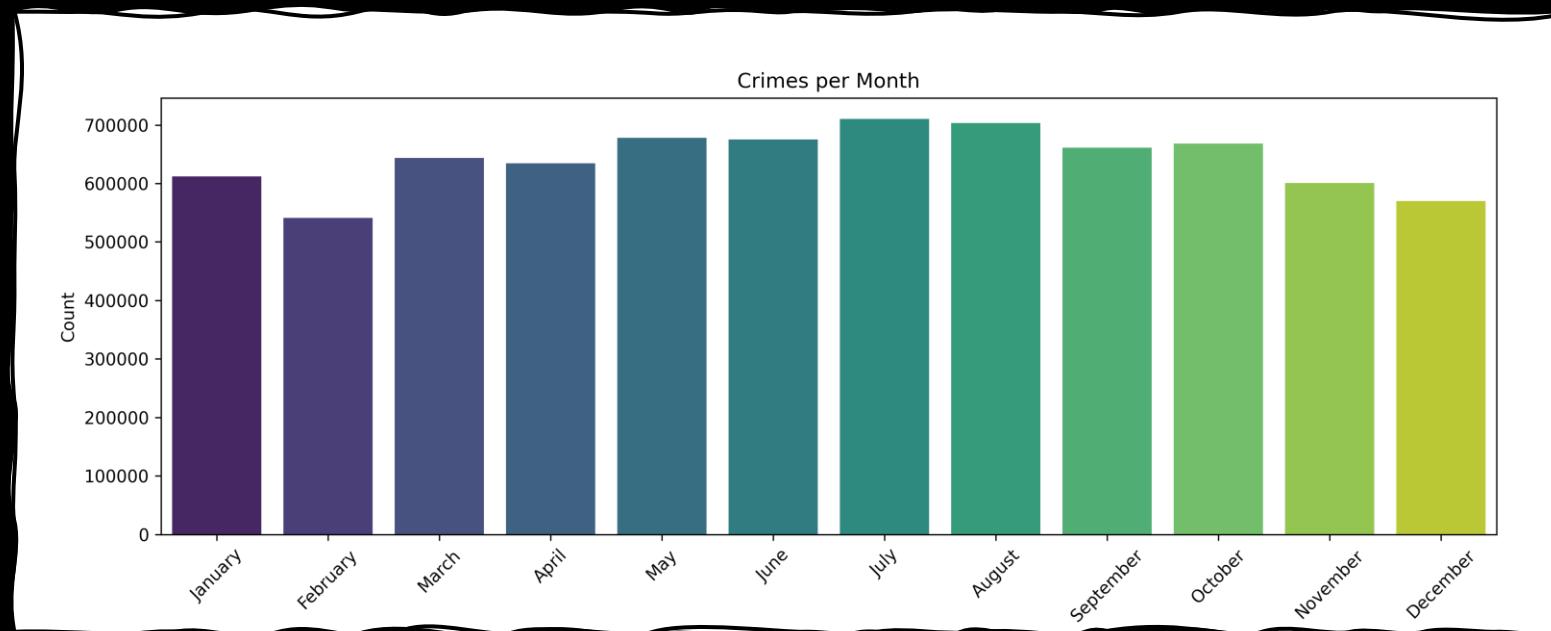
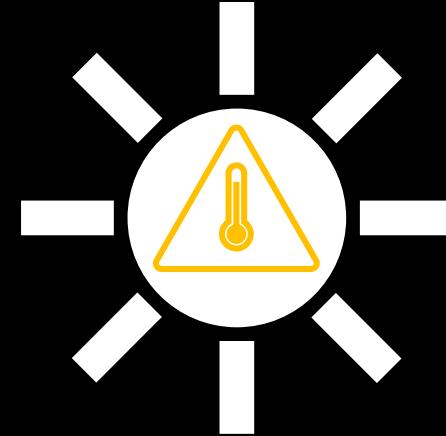


- Overall crime volumes have trended downward from their early 2000s peaks, while 2013–2014 marked some of the lowest levels in decades.



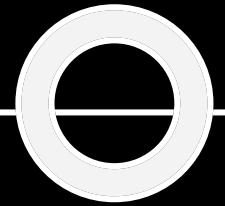
WHAT ABOUT SEASONALITY?

- Crime volumes are clearly seasonal, peaking in July and August
- There is a notable drop in February, followed by a steady climb as temperature rises

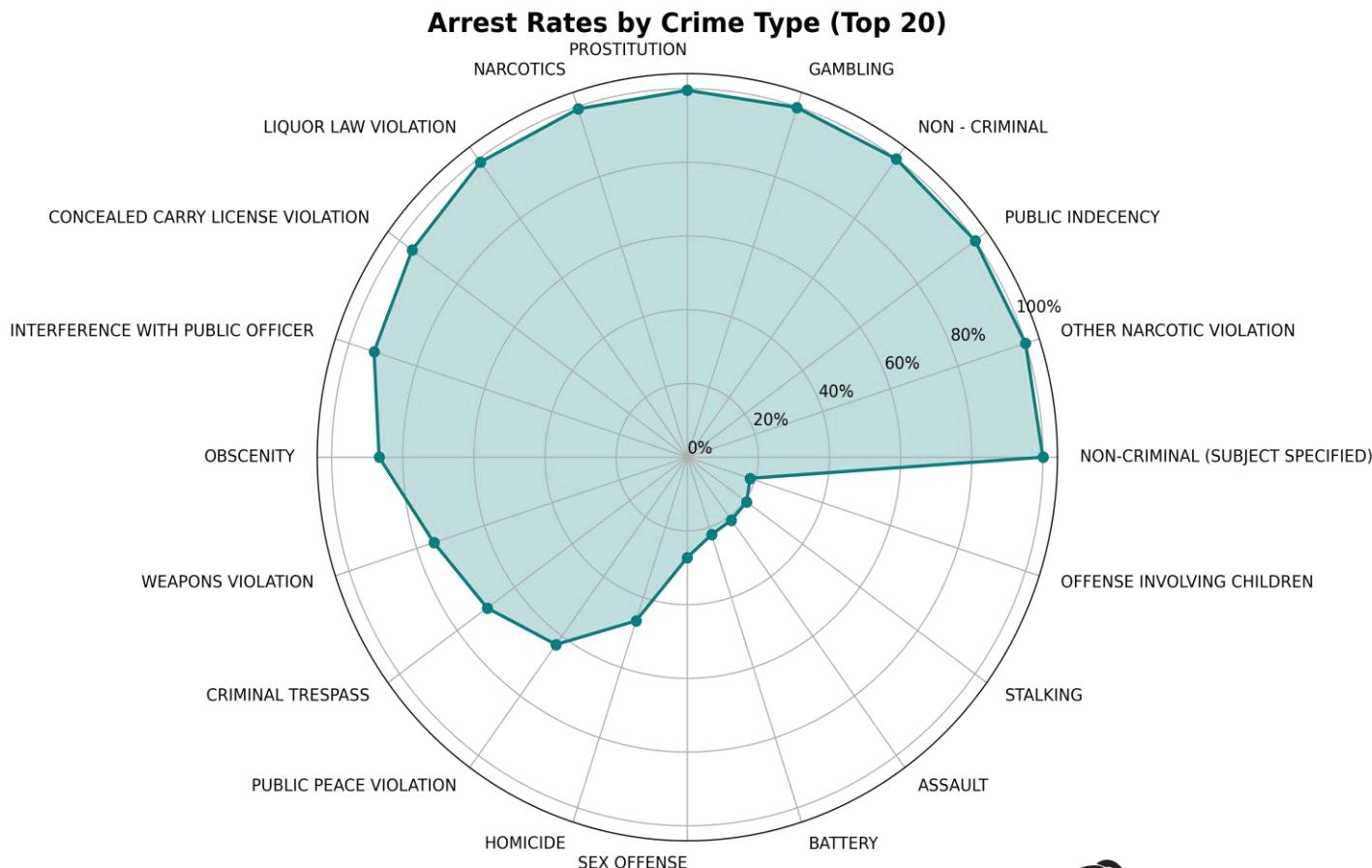


- Despite seasonal fluctuations, the top three crime categories remain unchanged.

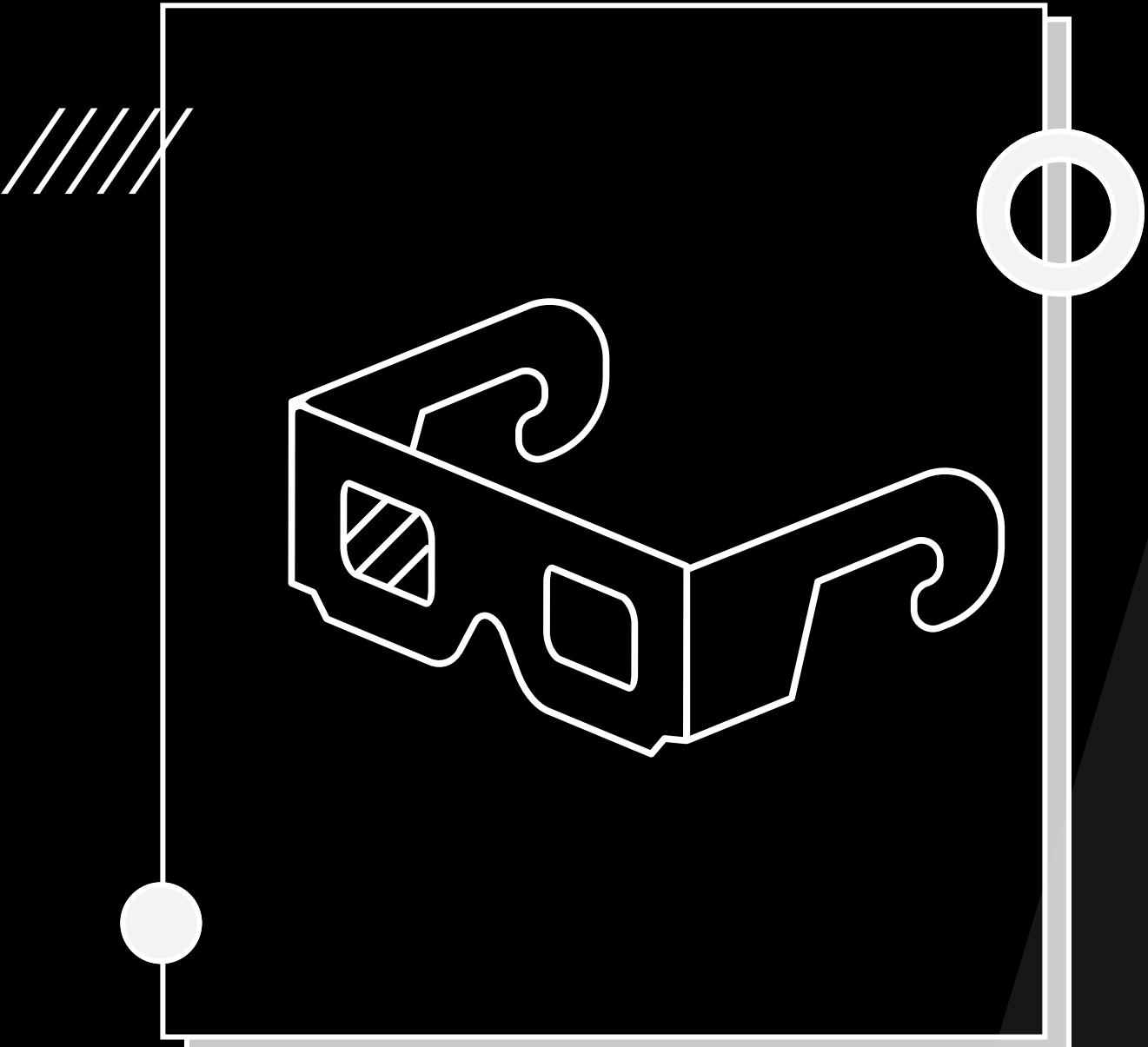
ARREST RATES



- Crimes categorized as **Prostitution, Narcotics, and Gambling** show nearly 100% arrest rates.
- There is a sharp inward "dip" for **Homicide, Assault, and Battery**.
- **Stalking** and **Offense Involving Children** show some of the lowest arrest rates on the chart



DEMOS



OUR INSIGHTS – RECOMMENDATIONS

1

Increase police presence during prime hours and summer months – to prevent crime and ensure faster response times.

2

Install street panic buttons – enabling citizens to alert authorities immediately in dangerous situations.

3

Focus on improving arrest rates for **Homicide, Assault, and Battery** – to enhance law enforcement

4

Deploy surveillance cameras at crime hotspots (e.g., the Loop area) – to deter crime and assist investigations.



THANK YOU!

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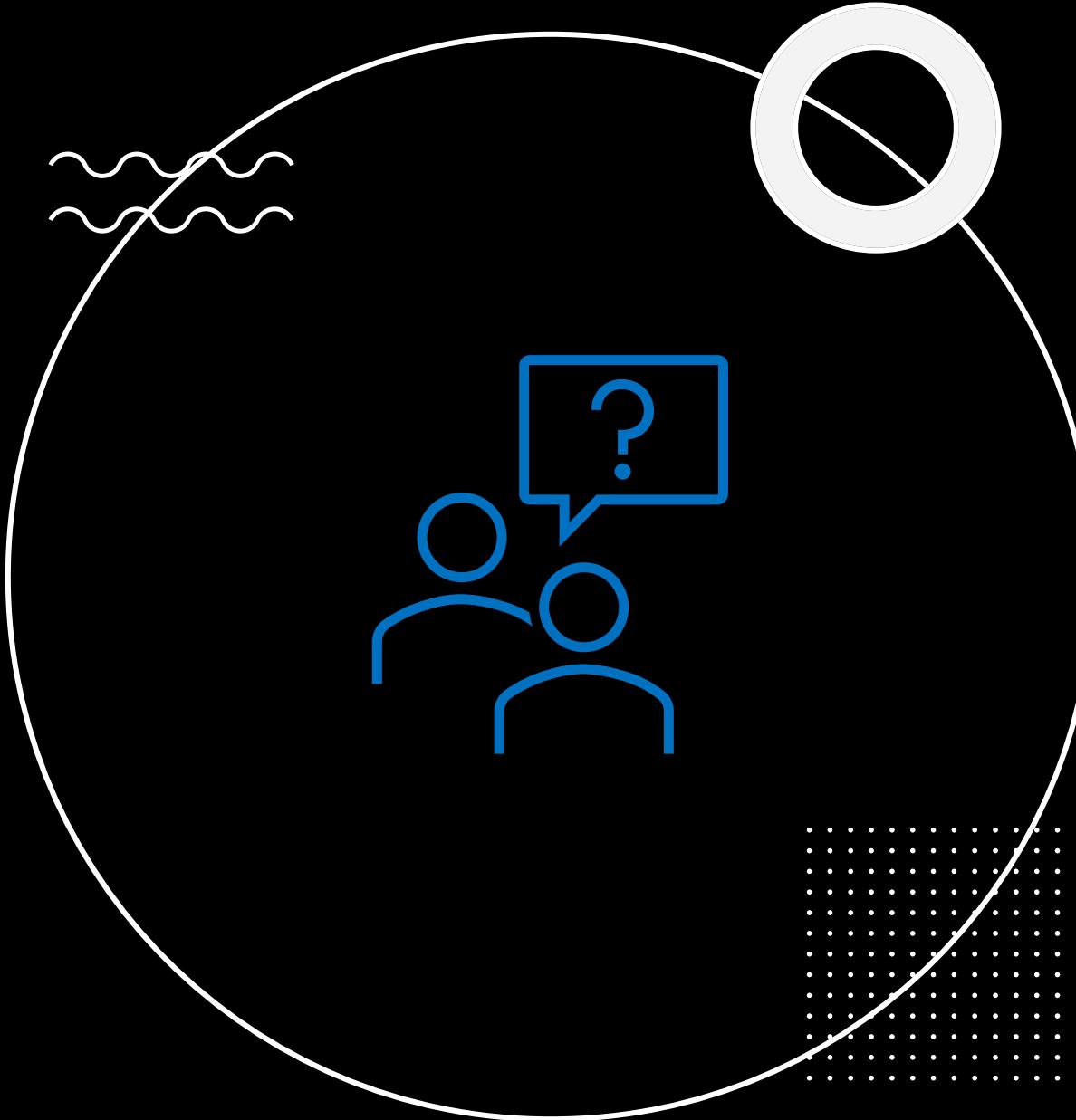
▪ **KALLIOPI GIANNOUKOU**



▪ **ATHANASIOS SAKATZIADIS**



▪ **EVANGELIA KATSANOU**



Q&A