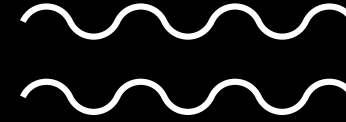
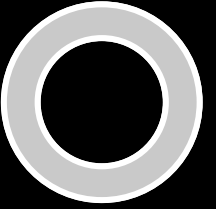




# CRIMES IN CHICAGO

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



## ➤ MEET THE TEAM



### ▪ **Kalliopi Giannoukou**

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,  
University of the Aegean



### ▪ **Evangelia Katsanou**

Health Claims Adjuster

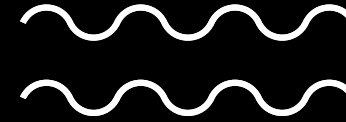
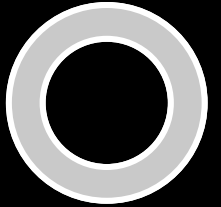
BSc, Business Administration and  
Management,  
University of Piraeus

# 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

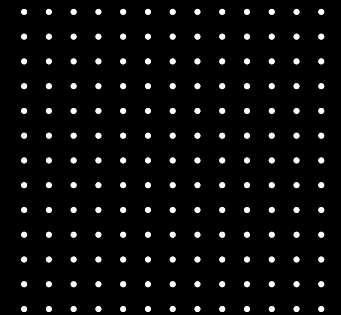
**CLEANING**

**EDA WITH  
PANDAS**

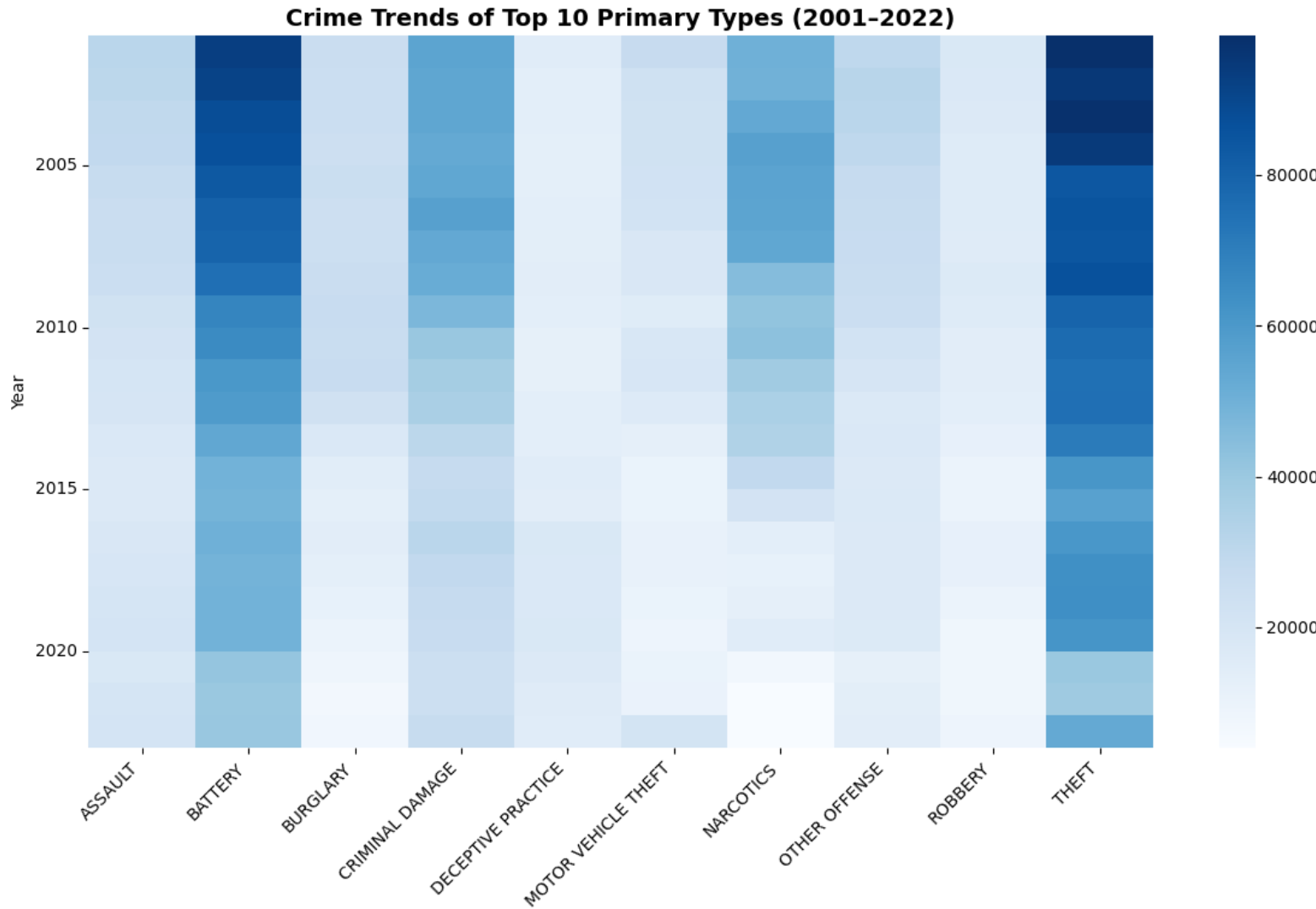
**POWER BI**

**STREAMLIT**

**INSIGHTS**



# VOLUMES TIMELINE



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



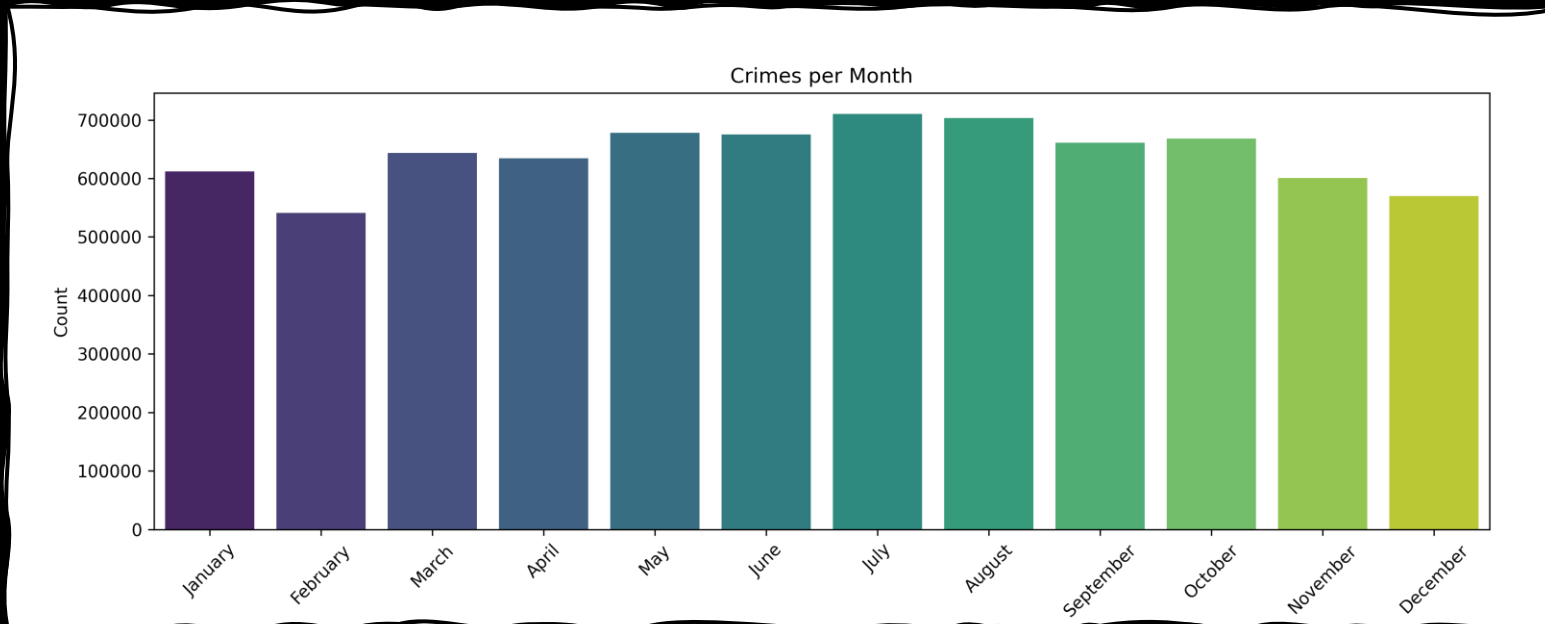
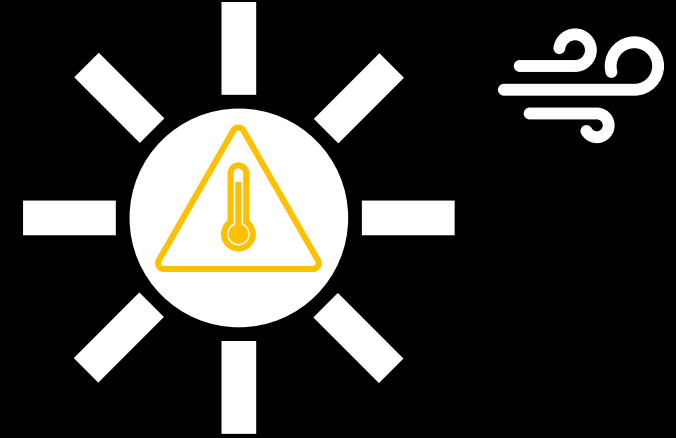
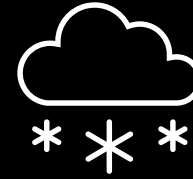
- Overall crime volumes, have trended downward from their early 2000s peaks, while 2013–2014 marked some of the lowest levels in decades.





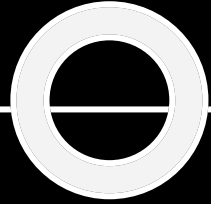
# WHAT ABOUT SEASONALITY?

- 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



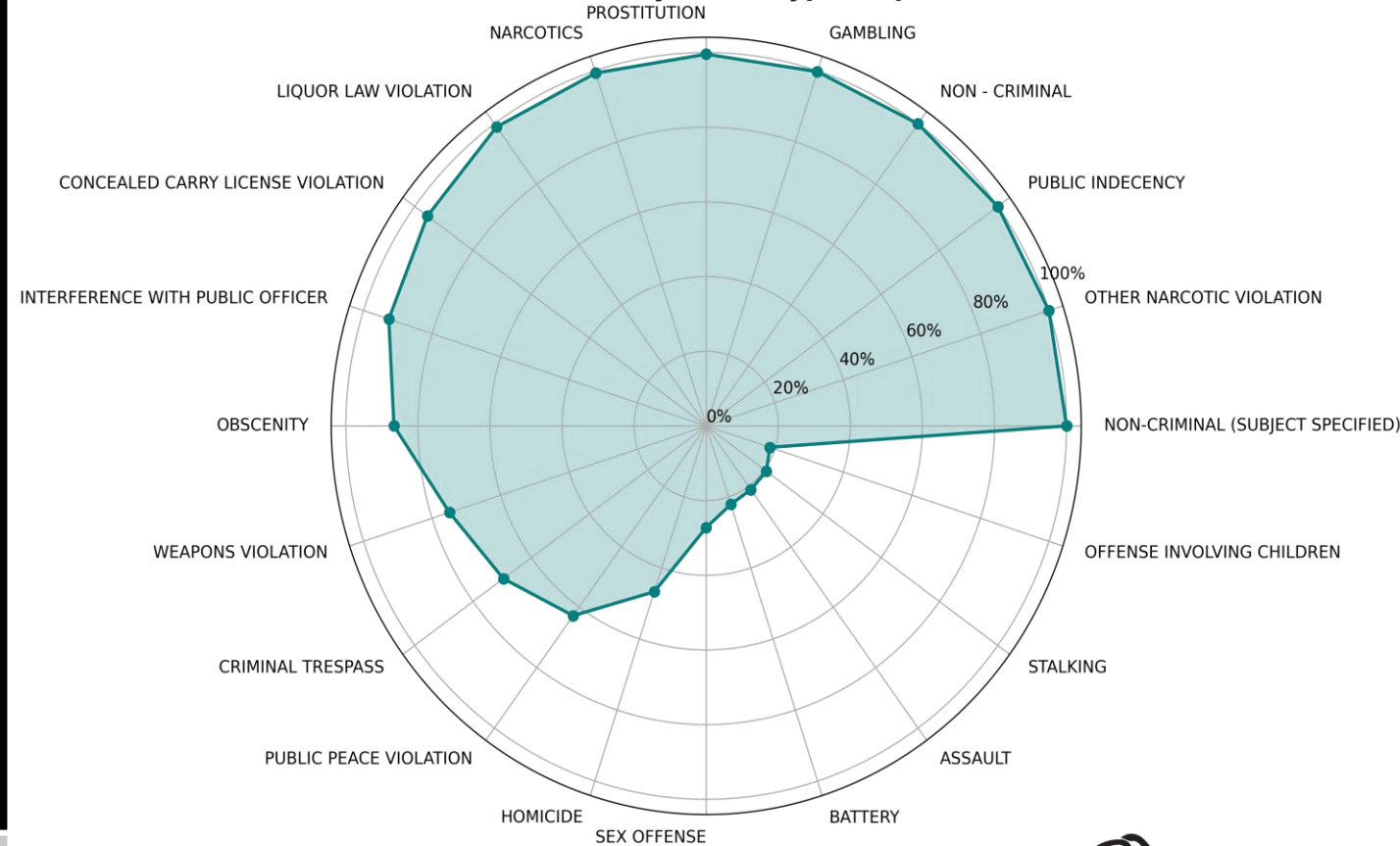
- Despite seasonal fluctuations, the top three crime categories remain unchanged.

# ARREST RATES

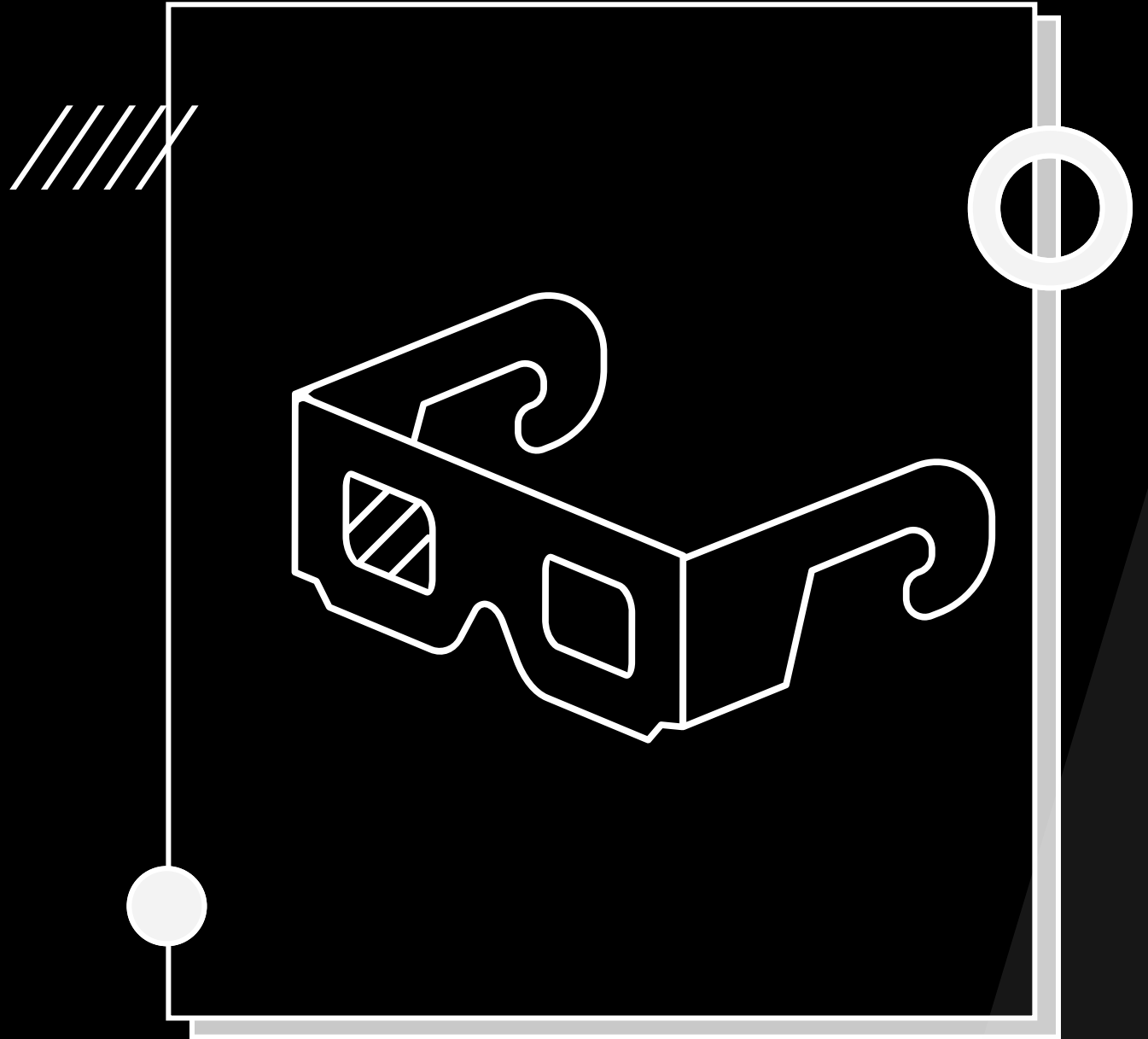


- Crimes categorized as **Prostitution, Narcotics, and Gambling** show nearly 100% arrest rates.
- There is a sharp inward "dip" for **Homicide, Assault, and Battery**.
- **Stalking and Offense Involving Children** show some of the lowest arrest rates on the chart

**Arrest Rates by Crime Type (Top 20)**



# 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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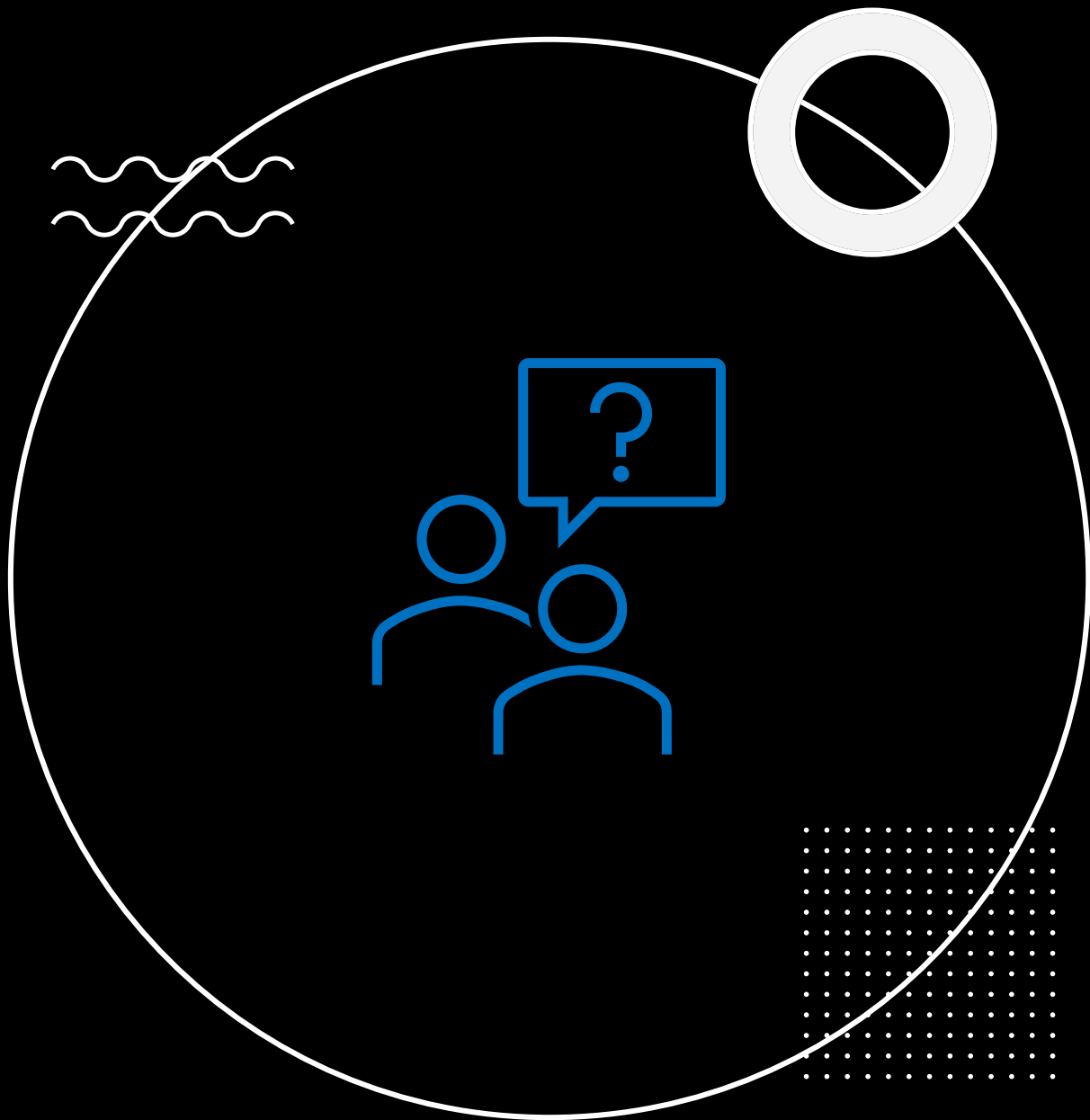
▪ **KALLIOPI GIANNOUKOU**



▪ **ATHANASIOS SAKATZIADIS**



▪ **EVANGELIA KATSANOU**



# Q&A