**חלק 3 פרויקט בינה-עסקית**

חישוב מונה מספר הפעמים שסוג העבירה הינה מהירות מופרזת וגם נערך חיפוש ברכב:

SELECT COUNT(\*) FILTER (WHERE violation = 'speeding' AND search\_conducted = True) OVER () AS count\_speeding\_searches

FROM BIData;

חישוב ממוצע גיל עבור כל סוג עבירה:

SELECT violation, AVG(driver\_age\_raw) OVER (PARTITION BY violation) AS average\_age

FROM BIData;

זיהוי העבירה הנפוצה לפי מוצא:

SELECT DISTINCT ON (driver\_race) driver\_race, violation, violation\_count

FROM (

SELECT driver\_race, violation,

COUNT(\*) OVER (PARTITION BY driver\_race, violation) AS violation\_count,

ROW\_NUMBER() OVER (PARTITION BY driver\_race ORDER BY COUNT(\*) DESC) AS rn

FROM BIData

GROUP BY driver\_race, violation

) AS subquery

WHERE rn = 1;

חישוב חמשת העבירות הנפוצות בכל מדינה בסדר יורד:

SELECT country, violation, violation\_count

FROM (

SELECT country, violation, COUNT(\*) AS violation\_count,

ROW\_NUMBER() OVER (PARTITION BY country ORDER BY COUNT(\*) DESC) AS rn

FROM BIData

GROUP BY country, violation

) AS subquery

WHERE rn <= 5;

חישוב אחוז העבירות שגרמו למעצר לפי מדינה :

SELECT country, violation, arrest\_percentage

FROM (

SELECT country, violation,

COUNT(\*) FILTER (WHERE stop\_outcome = 'arrested') \* 100.0 / COUNT(\*) OVER (PARTITION BY country) AS arrest\_percentage,

ROW\_NUMBER() OVER (PARTITION BY country ORDER BY COUNT(\*) DESC) AS rn

FROM BIData

GROUP BY country, violation

) AS subquery

WHERE rn = 1;

אחוז העבירות שתוצאתן הייתה אזהרה מילולית- גברים למול נשים לפי סוג עבירה:

SELECT

violation,

100.0 \* COUNT(\*) FILTER (WHERE driver\_gender = 'F' AND stop\_outcome = 'verbal warning')

/ SUM(COUNT(\*) FILTER (WHERE driver\_gender = 'F') OVER (PARTITION BY violation))

OVER (PARTITION BY violation) AS women\_verbal\_warning\_percentage,

100.0 \* COUNT(\*) FILTER (WHERE driver\_gender = 'M' AND stop\_outcome = 'verbal warning')

/ SUM(COUNT(\*) FILTER (WHERE driver\_gender = 'M') OVER (PARTITION BY violation))

OVER (PARTITION BY violation) AS men\_verbal\_warning\_percentage

FROM BIData

WINDOW w AS (PARTITION BY violation);

אחוז העבירות שנמצא בהם חומר אסור לפי סוג עבירה:

SELECT

violation,

100.0 \* COUNT(\*) FILTER (WHERE contraband\_found = TRUE)

/ SUM(COUNT(\*)) OVER (PARTITION BY violation) AS contraband\_percentage

FROM BIData

WINDOW w AS (PARTITION BY violation);

מציג את המיקומים בהם קרו הכי הרבה מקרים ואת חמשת המקרים הנפוצים ממויינים בסדר יורד:

SELECT

location\_raw,

violation,

incident\_count

FROM (

SELECT

location\_raw, violation,

COUNT(\*) AS incident\_count,

ROW\_NUMBER() OVER (PARTITION BY location\_raw ORDER BY COUNT(\*) DESC) AS rn

FROM BIData

WINDOW w AS (PARTITION BY location\_raw)

) AS subquery

WHERE rn <= 5

ORDER BY incident\_count DESC;