-- Chart 8: ETH price overlay with total activity (PROPERLY FILTERED)

WITH eth\_prices AS (

SELECT

DATE\_TRUNC('month', hour) AS month,

AVG(price) AS avg\_eth\_price\_usd

FROM ETHEREUM.PRICE.EZ\_PRICES\_HOURLY

WHERE symbol = 'ETH'

AND hour >= '2023-01-01'

AND hour < '2025-09-01'

AND price BETWEEN 100 AND 10000 -- Apply filter directly to price data

GROUP BY 1

),

total\_activity AS (

SELECT

DATE\_TRUNC('month', block\_timestamp) AS month,

COUNT(\*) AS total\_transactions,

COUNT(DISTINCT origin\_from\_address) AS unique\_users,

SUM(COALESCE(amount\_in\_usd, 0)) AS total\_volume\_usd

FROM ETHEREUM.CORE.FACT\_TRANSACTIONS

WHERE block\_timestamp >= '2023-01-01'

AND block\_timestamp < '2025-09-01'

AND amount\_in\_usd BETWEEN 0.1 AND 1e9

AND amount\_in\_usd IS NOT NULL

GROUP BY 1

)

SELECT

p.month,

p.avg\_eth\_price\_usd,

a.total\_transactions,

a.unique\_users,

a.total\_volume\_usd / 1e9 AS total\_volume\_billions,

-- Activity intensity index (normalized)

(a.total\_transactions::float / 10000000) + (a.unique\_users::float / 1000000) AS activity\_index

FROM eth\_prices p

JOIN total\_activity a ON p.month = a.month

ORDER BY p.month