-- ETH Price vs Transaction Fees Correlation Analysis (Simplified)

WITH price\_data 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

GROUP BY 1

),

fee\_data AS (

SELECT

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

AVG(tx\_fee) AS avg\_tx\_fee\_eth,

AVG(gas\_price / 1e9) AS avg\_gas\_price\_gwei,

COUNT(\*) AS monthly\_transactions

FROM ETHEREUM.CORE.FACT\_TRANSACTIONS

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

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

AND tx\_fee IS NOT NULL

AND tx\_fee > 0

AND tx\_fee < 5

GROUP BY 1

)

SELECT

p.month,

p.avg\_eth\_price\_usd,

f.avg\_tx\_fee\_eth,

f.avg\_gas\_price\_gwei,

f.monthly\_transactions,

-- Calculate USD fees

f.avg\_tx\_fee\_eth \* p.avg\_eth\_price\_usd AS avg\_tx\_fee\_usd,

-- Price to fee ratio

p.avg\_eth\_price\_usd / NULLIF(f.avg\_tx\_fee\_eth \* p.avg\_eth\_price\_usd, 0) AS price\_to\_fee\_ratio,

-- Activity intensity

f.monthly\_transactions / 1000000.0 AS tx\_millions

FROM price\_data p

JOIN fee\_data f ON p.month = f.month

ORDER BY p.month