Finding average time between orders for loyalty vs nonloyalty

```
--for each customer, find dates that represent gaps between every order
WITH gapdate AS (
 SELECT orders.customer_id
   ,customers.loyalty_program
   ,orders.purchase_ts AS secondorder
   ,LAG(orders.purchase_ts,1) OVER (PARTITION BY orders.customer_id ORDER BY
orders.purchase_ts) AS firstorder
 FROM core.orders
   LEFT JOIN core.customers
   ON orders.customer_id = customers.id
)
```

Finding average time between orders for loyalty program

```
--calculate the average time between orders and number of repeat customers and group
by loyalty program
SELECT loyalty_program
 ,AVG(DATE_DIFF(secondorder,firstorder,DAY)) AS gapbetweenorders
 ,COUNT(DISTINCT customer_id) AS numberofrepeatcustomers
FROM gapdate
WHERE firstorder IS NOT NULL AND loyalty_program IS NOT NULL
GROUP BY loyalty_program
```

Comparing AOV across regions

```
-- finding AOV across regions
SELECT geo_lookup.region
 ,AVG(orders.usd_price)
FROM core.orders
 LEFT JOIN core.customers_orig
 ON orders.customer_id = customers_orig.id
 LEFT JOIN core.geo_lookup
 ON customers_orig.country_code = geo_lookup.country_code
GROUP BY 1
```

Dips in October and February across regions

```
--Is October and February dips worst in certain regions?
WITH MonthlyRevenue AS(
 SELECT
```

```
    EXTRACT(YEAR FROM order_status.delivery_ts) AS Year
    ,EXTRACT (MONTH FROM order_status.delivery_ts) AS Month
    ,SUM(orders.usd_price) AS tot_revenue
    ,geo_lookup.region AS Region
  FROM core.orders
    LEFT JOIN core.order_status
    ON orders.id = order_status.order_id
    LEFT JOIN core.customers_orig
    ON orders.customer_id = customers_orig.id
    LEFT JOIN core.geo_lookup
    ON customers_orig.country_code = geo_lookup.country_code
  GROUP BY
    Year
    ,Month
    ,Region
),
OctMonthlyComparison AS(
  SELECT
    month1.Year
    ,((SUM(month2.tot_revenue) / SUM(month1.tot_revenue)) - 1) * 100 AS percent_change
    ,month1.Region
  FROM MonthlyRevenue AS month1
    INNER JOIN MonthlyRevenue AS month2
    ON month1.Year = month2.Year
  WHERE
    month1.Month = 9 --September
    AND month2.Month = 10 --October
  GROUP BY
    Year
    ,Region
),
FebMonthlyComparison AS(
  SELECT
    month1.Year
    ,((SUM(month2.tot_revenue) / SUM(month1.tot_revenue)) - 1) * 100 AS percent_change
    ,month1.Region
```

```
 FROM MonthlyRevenue AS month1
   INNER JOIN MonthlyRevenue AS month2
   ON month1.Year = month2.Year
 WHERE
   month1.Month = 1 --January
   AND month2.Month = 2 --February
 GROUP BY
   Year
   ,Region
)

SELECT
 OctMonthlyComparison.Region
 ,AVG(OctMonthlyComparison.percent_change) AS OctoberDip
 ,AVG(FebMonthlyComparison.percent_change) AS FebruaryDip
FROM OctMonthlyComparison
 INNER JOIN FebMonthlyComparison
 ON OctMonthlyComparison.Year = FebMonthlyComparison.Year
   AND OctMonthlyComparison.Region = FebMonthlyComparison.Region
GROUP BY
 Region
```