

## 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
)
--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
```