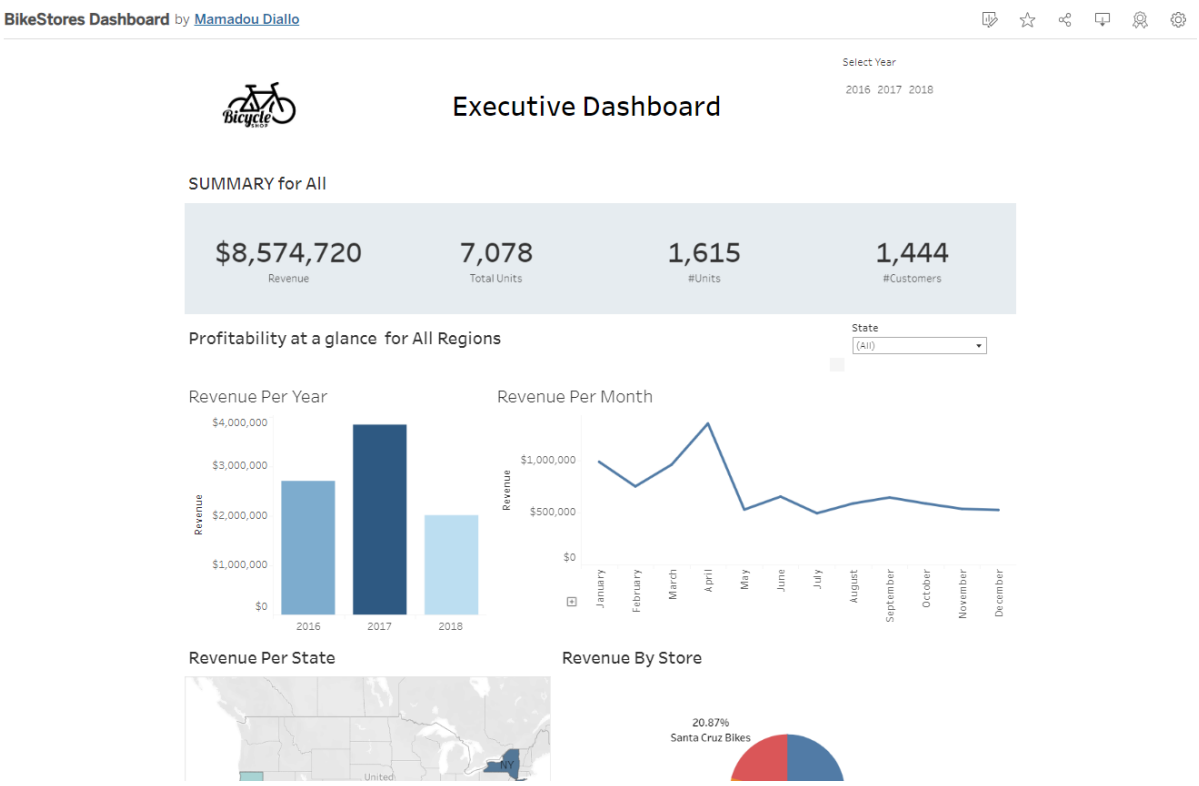
SQL- Excel – Tableau--- Title project: Bike Stores Performance Report



https://public.tableau.com/app/profile/mamadou.diallo4319/viz/BikeStoresDashboard_17223829996750/Dashboard1

In this theoretical exercise, I assume the role of a data analyst working for a bicycle retailer with three locations in the United States. My manager requested a comprehensive report on the company's performance from 2016 to 2018. I was given the freedom to design the report as I saw fit, ensuring it included all necessary information for informed decision-making.

To create this report, I utilized SQL, Excel, and Tableau. First, I wrote a detailed SQL query to extract the required data from the company's database. This query involved pulling data from eight separate tables and using direct and indirect joins to connect them.

```
SELECT
    ord.order_id,
    CONCAT(cus.first_name,' ',cus.last_name) AS 'customers',
    cus.city,
    cus.state,
    ord.order_date,
    SUM(ite.quantity) AS 'total_units',
    SUM(ite.quantity * ite.list_price) AS 'revenue',
    pro.product_name,
    cat.category_name,
    sto.store_name,
    CONCAT(sta.first_name,' ',sta.last_name) AS 'sales_rep',
    bra.brand_name
FROM sales.orders ord
JOIN sales.customers cus
ON ord.customer_id = cus.customer_id
JOIN sales.order_items ite
ON ord.order_id = ite.order_id
JOIN production.products pro
ON ite.product_id = pro.product_id
JOIN production.categories cat
ON pro.category_id = cat.category_id
JOIN sales.stores sto
ON ord.store_id = sto.store_id
JOIN sales.staffs sta
ON ord.staff_id = sta.staff_id
JOIN production.brands bra
ON pro.brand_id = bra.brand_id
GROUP BY
    ord.order_id,
    CONCAT(cus.first_name,' ',cus.last_name),
    cus.city,
    cus.state,
    ord.order_date,
    pro.product_name,
    cat.category_name,
    sto.store_name,
    CONCAT(sta.first_name,' ',sta.last_name),
    bra.brand_name
```

Once the data was retrieved, I imported it into an Excel workbook and created an interactive executive dashboard for management. The workbook included three main worksheets: one for the imported SQL data, one for pivot tables used to generate graphs and charts, and one for the executive dashboard itself. The dashboard featured slicers for filtering by year, state, and store name, and contained various charts such as total revenue, revenue per year, revenue per month, revenue per state, revenue per store, revenue per brand, revenue per product category, top 10 customers, and revenue per sales rep.

Finally, I connected the SQL-generated Excel data to Tableau and created an even more interactive executive dashboard. This Tableau dashboard mirrored the Excel dashboard in terms of charts and filter actions, allowing for dynamic data visualization and analysis.