Stone – Data-Driven Insights & Business Solutions

Machine Learning & Analytics | SQL, Python, R | Healthcare, Banking, Forecasting
Budgeting | Healthcare & Insurance Analysis | Bank & Customer Insights
Data Visualization | Power BI | Excel Modeling | Jupyter Notebook

SQL

Invalid Pickup Locations

- Some trips have `PULocationID` values that do not exist in the official `taxi_zone_lookup`.
- **Outcome:** Highlights data inconsistencies and missing location mappings.

Unusual Trip Distances

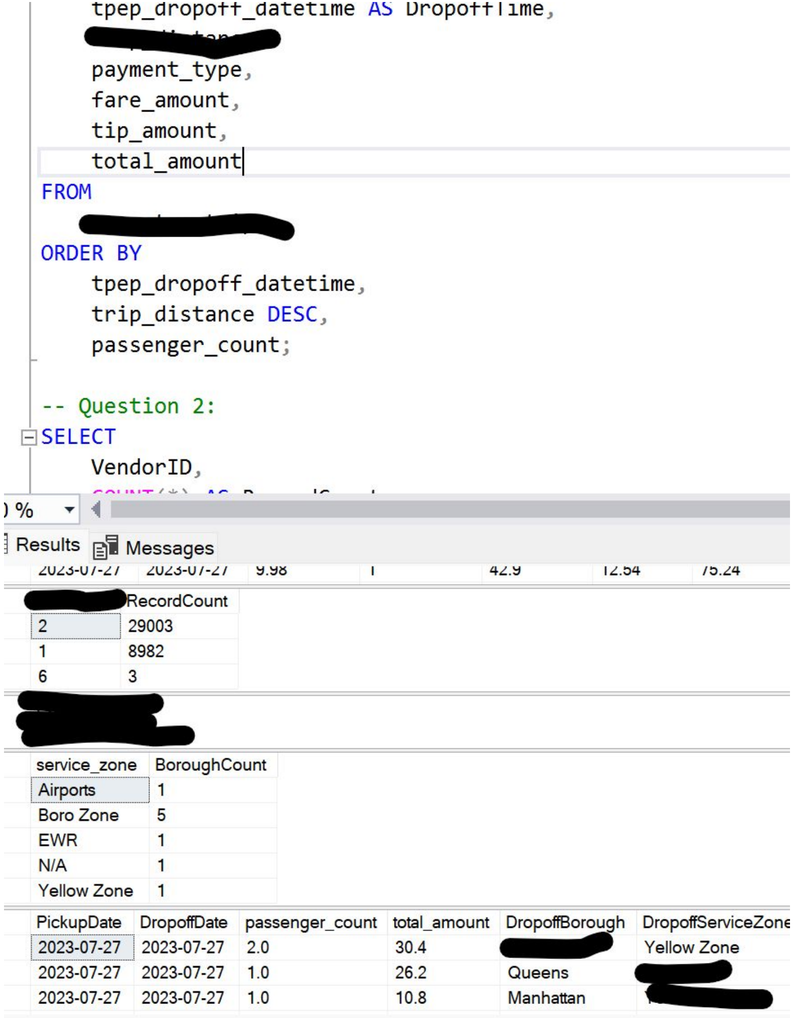
- Some trips recorded zero, negative, or excessively high distances (e.g., over 50 miles).
- **Outcome:** Identifies potential errors in trip data affecting fare calculations.

Mismatched Fare Amounts

- Some fares are significantly too low (<$2) or too high relative to trip distance.
- **Outcome:** Detects incorrect fare entries or potential fraudulent activity.

Service Zone Anomalies

- Certain service zones are linked to multiple boroughs, which should not occur.
- **Outcome:** Flags inconsistencies in zone mapping that could impact reporting.



```
        tpep_dropoff_datetime AS DropoffTime,
        [redacted]
        payment_type,
        fare_amount,
        tip_amount,
        total_amount
    FROM
        [redacted]
    ORDER BY
        tpep_dropoff_datetime,
        trip_distance DESC,
        passenger_count;

    -- Question 2:
    SELECT
        VendorID,
```

```
2023-07-27   2023-07-27   9.98   1   42.9   12.54   75.24
```

[redacted]	RecordCount
2	29003
1	8982
6	3

[redacted]

service_zone	BoroughCount
Airports	1
Boro Zone	5
EWR	1
N/A	1
Yellow Zone	1

PickupDate	DropoffDate	passenger_count	total_amount	DropoffBorough	DropoffServiceZone
2023-07-27	2023-07-27	2.0	30.4	[redacted]	Yellow Zone
2023-07-27	2023-07-27	1.0	26.2	Queens	[redacted]
2023-07-27	2023-07-27	1.0	10.8	Manhattan	[redacted]

SQL

App Count per Category

- Groups apps by category and counts the number of apps in each.
- **Outcome:** Identifies which categories have the most or least apps.

Most Reviewed App

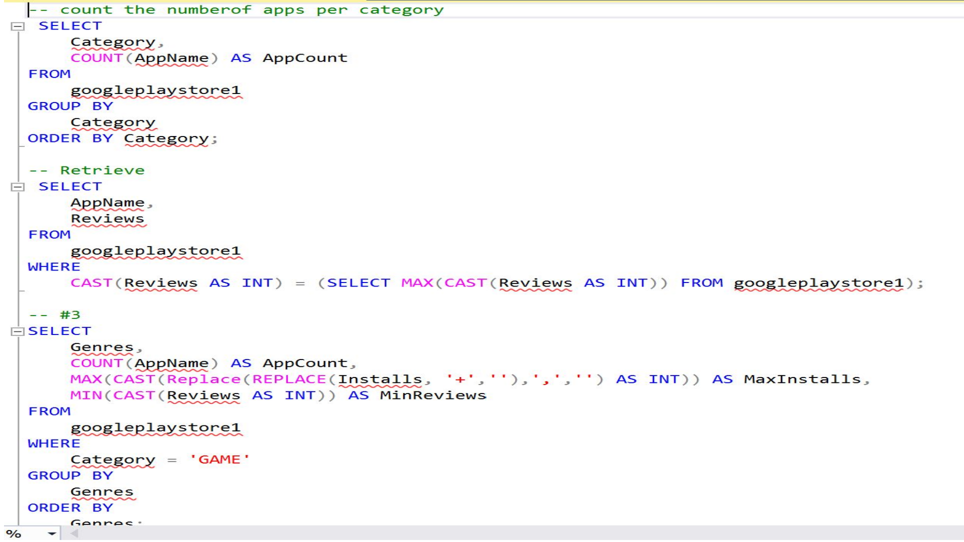
- Retrieves the app with the highest number of reviews.
- **Outcome:** Highlights the most engaged and popular app.

Game Genre Statistics

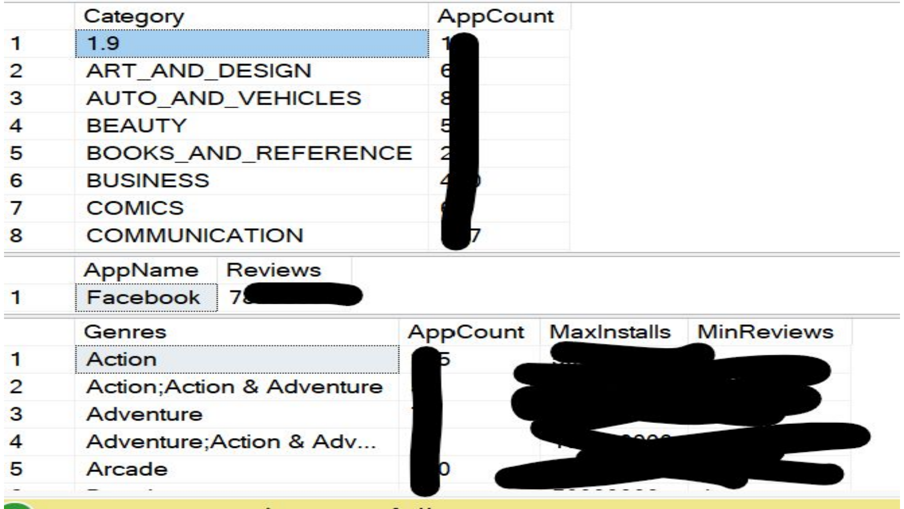
- Finds the number of apps, max installs, and min reviews per game genre.
- **Outcome:** Provides insights into game market trends and user engagement.

Unique Genres per Category

- Counts distinct genres within each app category.
- **Outcome:** Shows category diversity and market segmentation.



```
-- count the numberof apps per category
 SELECT
     Category,
     COUNT(AppName) AS AppCount
FROM
     googleplaystore1
GROUP BY
     Category
ORDER BY Category;

-- Retrieve
 SELECT
     AppName,
     Reviews
FROM
     googleplaystore1
WHERE
     CAST(Reviews AS INT) = (SELECT MAX(CAST(Reviews AS INT)) FROM googleplaystore1);

-- #3
SELECT
     Genres,
     COUNT(AppName) AS AppCount,
     MAX(CAST(Replace(REPLACE(Installs, '+',''),',','') AS INT)) AS MaxInstalls,
     MIN(CAST(Reviews AS INT)) AS MinReviews
FROM
     googleplaystore1
WHERE
     Category = 'GAME'
GROUP BY
     Genres
ORDER BY
     Genres;
```

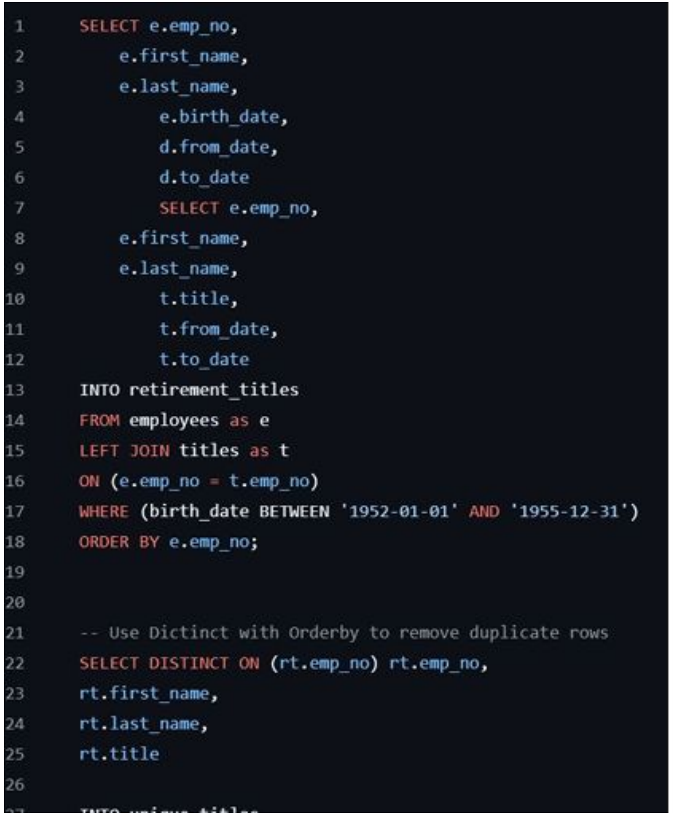


	Category	AppCount
1	1.9	[redacted]
2	ART_AND_DESIGN	[redacted]
3	AUTO_AND_VEHICLES	[redacted]
4	BEAUTY	[redacted]
5	BOOKS_AND_REFERENCE	[redacted]
6	BUSINESS	[redacted]
7	COMICS	[redacted]
8	COMMUNICATION	[redacted]

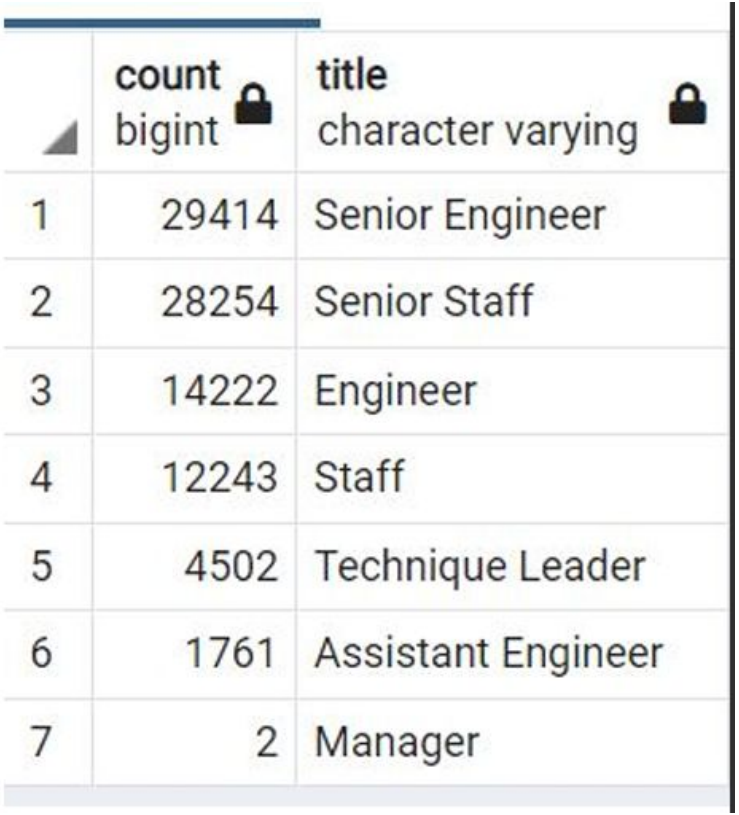
	AppName	Reviews
1	Facebook	[redacted]

	Genres	AppCount	MaxInstalls	MinReviews
1	Action	[redacted]	[redacted]	[redacted]
2	Action;Action & Adventure	[redacted]	[redacted]	[redacted]
3	Adventure	[redacted]	[redacted]	[redacted]
4	Adventure;Action & Adv...	[redacted]	[redacted]	[redacted]
5	Arcade	[redacted]	[redacted]	[redacted]

SQL

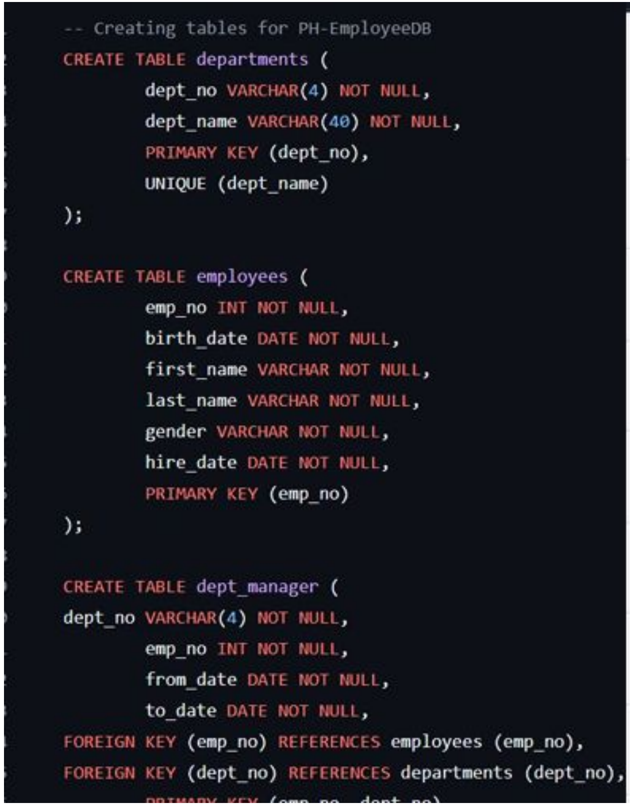


```sql
SELECT e.emp_no,
    e.first_name,
    e.last_name,
        e.birth_date,
        d.from_date,
        d.to_date
        SELECT e.emp_no,
    e.first_name,
    e.last_name,
        t.title,
        t.from_date,
        t.to_date
INTO retirement_titles
FROM employees as e
LEFT JOIN titles as t
ON (e.emp_no = t.emp_no)
WHERE (birth_date BETWEEN '1952-01-01' AND '1955-12-31')
ORDER BY e.emp_no;


-- Use Dictinct with Orderby to remove duplicate rows
SELECT DISTINCT ON (rt.emp_no) rt.emp_no,
rt.first_name,
rt.last_name,
rt.title

INTO unique_titles
```

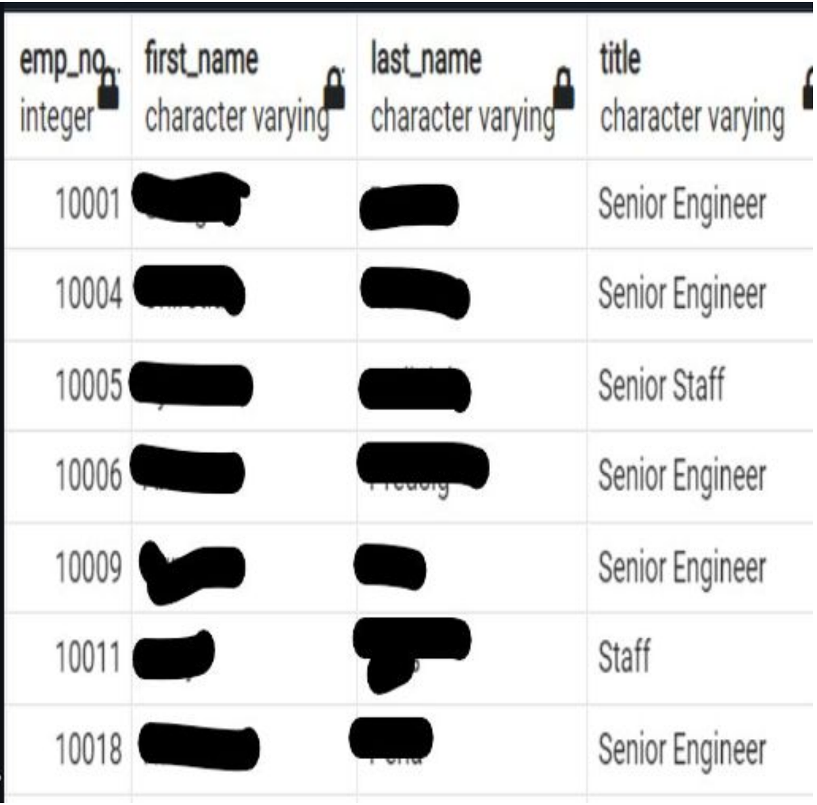


	count bigint	title character varying
1	29414	Senior Engineer
2	28254	Senior Staff
3	14222	Engineer
4	12243	Staff
5	4502	Technique Leader
6	1761	Assistant Engineer
7	2	Manager

SQL



```
-- Creating tables for PH-EmployeeDB
CREATE TABLE departments (
        dept_no VARCHAR(4) NOT NULL,
        dept_name VARCHAR(40) NOT NULL,
        PRIMARY KEY (dept_no),
        UNIQUE (dept_name)
);

CREATE TABLE employees (
        emp_no INT NOT NULL,
        birth_date DATE NOT NULL,
        first_name VARCHAR NOT NULL,
        last_name VARCHAR NOT NULL,
        gender VARCHAR NOT NULL,
        hire_date DATE NOT NULL,
        PRIMARY KEY (emp_no)
);

CREATE TABLE dept_manager (
dept_no VARCHAR(4) NOT NULL,
        emp_no INT NOT NULL,
        from_date DATE NOT NULL,
        to_date DATE NOT NULL,
FOREIGN KEY (emp_no) REFERENCES employees (emp_no),
FOREIGN KEY (dept_no) REFERENCES departments (dept_no),
        PRIMARY KEY (emp_no, dept_no)
```



emp_no integer	first_name character varying	last_name character varying	title character varying
10001	[redacted]	[redacted]	Senior Engineer
10004	[redacted]	[redacted]	Senior Engineer
10005	[redacted]	[redacted]	Senior Staff
10006	[redacted]	[redacted]	Senior Engineer
10009	[redacted]	[redacted]	Senior Engineer
10011	[redacted]	[redacted]	Staff
10018	[redacted]	[redacted]	Senior Engineer

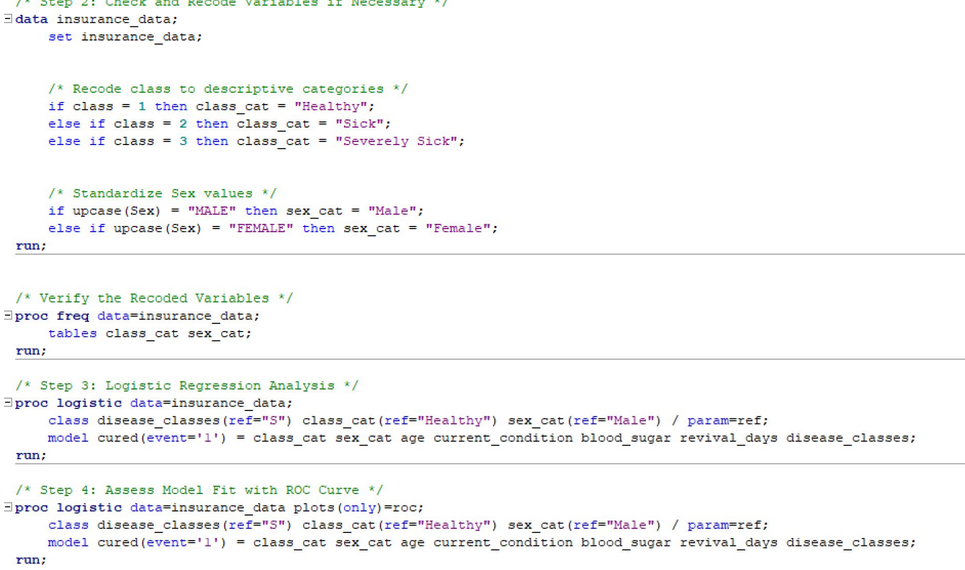
SAS- 1st part (Insurance Data)

Health Classification & Insurance Premiums (Insurance Data)

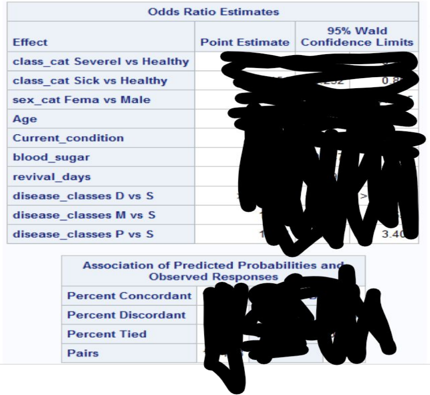
- Logistic regression categorizes individuals into "Healthy," "Sick," or "Severely Sick" to analyze premium adjustments.
- **Outcome:** Enhances accuracy in pricing insurance policies.

Predicting Patient Recovery (Insurance Data)

- Regression models assess how age, condition, blood sugar, and disease classes influence recovery rates.
- **Outcome:** Improves risk assessment for insurance and healthcare planning.



```
/* Step 2: Check and Recode Variables if Necessary */
data insurance_data;
    set insurance_data;


    /* Recode class to descriptive categories */
    if class = 1 then class_cat = "Healthy";
    else if class = 2 then class_cat = "Sick";
    else if class = 3 then class_cat = "Severely Sick";


    /* Standardize Sex values */
    if upcase(Sex) = "MALE" then sex_cat = "Male";
    else if upcase(Sex) = "FEMALE" then sex_cat = "Female";
run;


/* Verify the Recoded Variables */
proc freq data=insurance_data;
    tables class_cat sex_cat;
run;

/* Step 3: Logistic Regression Analysis */
proc logistic data=insurance_data;
    class disease_classes(ref="S") class_cat(ref="Healthy") sex_cat(ref="Male") / param=ref;
    model cured(event='1') = class_cat sex_cat age current_condition blood_sugar revival_days disease_classes;
run;

/* Step 4: Assess Model Fit with ROC Curve */
proc logistic data=insurance_data plots(only)=roc;
    class disease_classes(ref="S") class_cat(ref="Healthy") sex_cat(ref="Male") / param=ref;
    model cured(event='1') = class_cat sex_cat age current_condition blood_sugar revival_days disease_classes;
run;
```

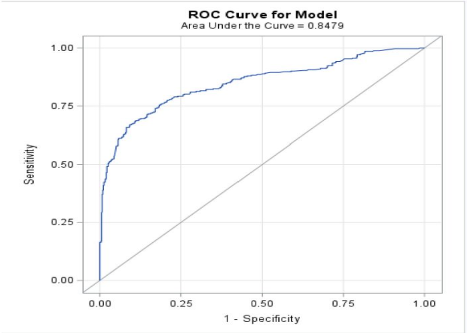


Odds Ratio Estimates

Effect	Point Estimate	95% Wald Confidence Limits	
class_cat Severel vs Healthy	[redacted]	[redacted]	[redacted]
class_cat Sick vs Healthy	[redacted]	[redacted]	[redacted]
sex_cat Fema vs Male	[redacted]	[redacted]	[redacted]
Age	[redacted]	[redacted]	[redacted]
Current_condition	[redacted]	[redacted]	[redacted]
blood_sugar	[redacted]	[redacted]	[redacted]
revival_days	[redacted]	[redacted]	[redacted]
disease_classes D vs S	[redacted]	[redacted]	[redacted]
disease_classes M vs S	[redacted]	[redacted]	[redacted]
disease_classes P vs S	[redacted]	[redacted]	[redacted]

Association of Predicted Probabilities and Observed Responses

Percent Concordant	[redacted]
Percent Discordant	[redacted]
Percent Tied	[redacted]
Pairs	[redacted]



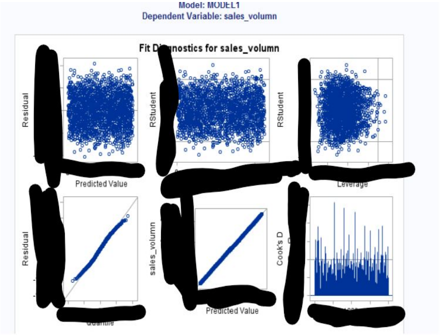
SAS - 2nd (Forecast)

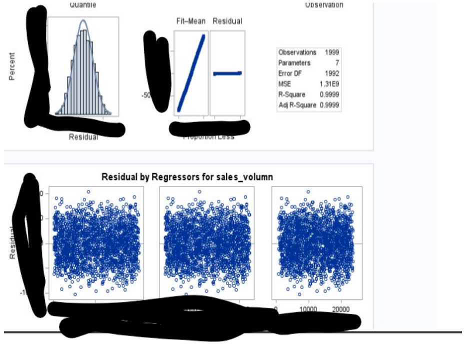
Sales Volume Impact Analysis (Forecast Consulting Data)

- Regression analysis identifies key factors (S1, S2, S4, S5, S6, occasional channel) affecting sales volume.
- **Outcome:** Supports strategic decision-making in marketing and resource allocation.

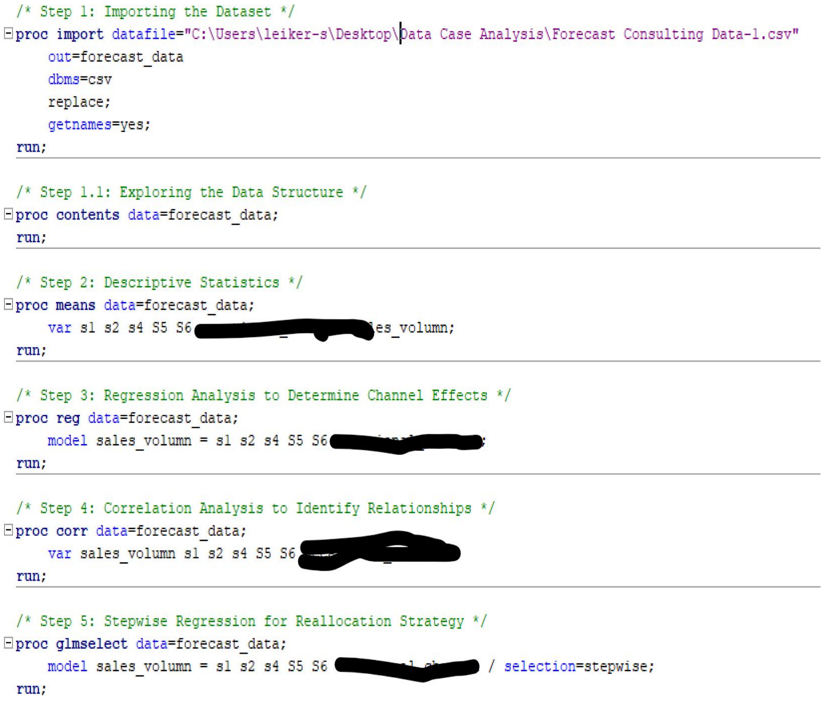
Correlation Between Factors (Forecast Consulting Data)

- Examines the relationships between sales volume and sales channels.
- **Outcome:** Provides insights into key drivers of sales performance.





```
Observations     1999
Parameters          7
Error DF         1992
MSE            1.31E9
R-Square       0.9999
Adj R-Square   0.9999
```



```
/* Step 1: Importing the Dataset */
proc import datafile="C:\Users\leiker-s\Desktop\Data Case Analysis\Forecast Consulting Data-1.csv"
    out=forecast_data
    dbms=csv
    replace;
    getnames=yes;
run;

/* Step 1.1: Exploring the Data Structure */
proc contents data=forecast_data;
run;

/* Step 2: Descriptive Statistics */
proc means data=forecast_data;
    var s1 s2 s4 S5 S6 [redacted]es_volumn;
run;

/* Step 3: Regression Analysis to Determine Channel Effects */
proc reg data=forecast_data;
    model sales_volumn = s1 s2 s4 S5 S6 [redacted];
run;

/* Step 4: Correlation Analysis to Identify Relationships */
proc corr data=forecast_data;
    var sales_volumn s1 s2 s4 S5 S6 [redacted]
run;

/* Step 5: Stepwise Regression for Reallocation Strategy */
proc glmselect data=forecast_data;
    model sales_volumn = s1 s2 s4 S5 S6 [redacted] / selection=stepwise;
run;
```

Python

Simulating Dice Rolls

- Rolls two six-sided dice repeatedly and tracks the outcomes.
- **Outcome:** Generates realistic dice roll distributions for probability estimation.

Checking for Double Sixes

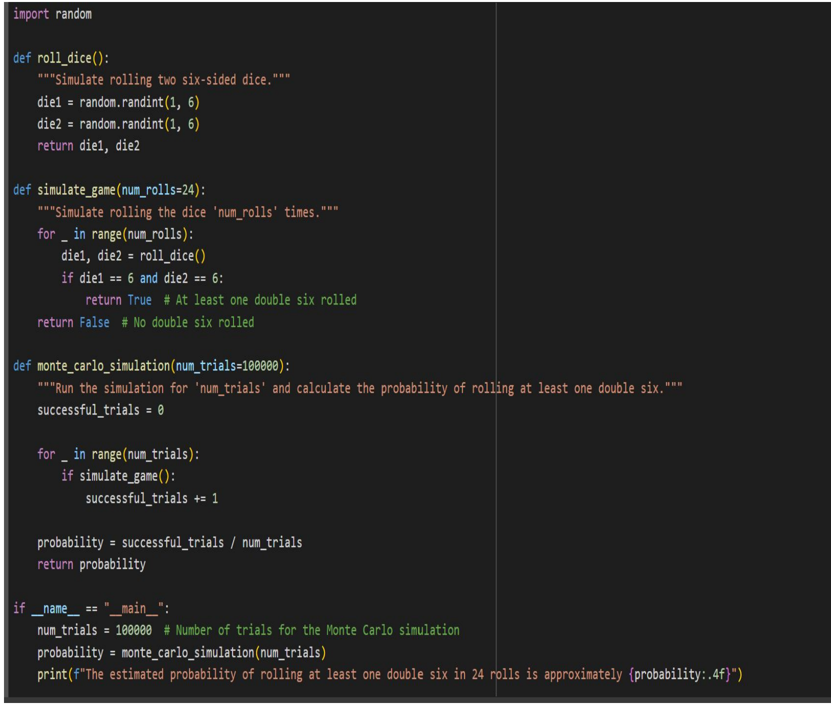
- Simulates 24 dice rolls in a game and determines if at least one double six appears.
- **Outcome:** Evaluates the likelihood of rolling double sixes in a session.

Monte Carlo Probability Estimation

- Runs multiple trials (e.g., 100,000) to estimate the probability of rolling at least one double six.
- **Outcome:** Provides a reliable statistical probability based on large-scale simulations.

Final Probability Calculation

- Computes the success rate from all trials and outputs the estimated probability.
- **Outcome:** Delivers an accurate probability approximation based on empirical data.



```python
import random

def roll_dice():
    """Simulate rolling two six-sided dice."""
    die1 = random.randint(1, 6)
    die2 = random.randint(1, 6)
    return die1, die2

def simulate_game(num_rolls=24):
    """Simulate rolling the dice 'num_rolls' times."""
    for _ in range(num_rolls):
        die1, die2 = roll_dice()
        if die1 == 6 and die2 == 6:
            return True  # At least one double six rolled
    return False  # No double six rolled

def monte_carlo_simulation(num_trials=100000):
    """Run the simulation for 'num_trials' and calculate the probability of rolling at least one double six."""
    successful_trials = 0

    for _ in range(num_trials):
        if simulate_game():
            successful_trials += 1

    probability = successful_trials / num_trials
    return probability

if __name__ == "__main__":
    num_trials = 100000  # Number of trials for the Monte Carlo simulation
    probability = monte_carlo_simulation(num_trials)
    print(f"The estimated probability of rolling at least one double six in 24 rolls is approximately {probability:.4f}")
```

Python

Reading Rose Bowl Data

- Loads team names from a file listing Rose Bowl winners from 1902 to 2020.
- **Outcome:** Extracts historical game results for analysis.

Counting Wins per Team

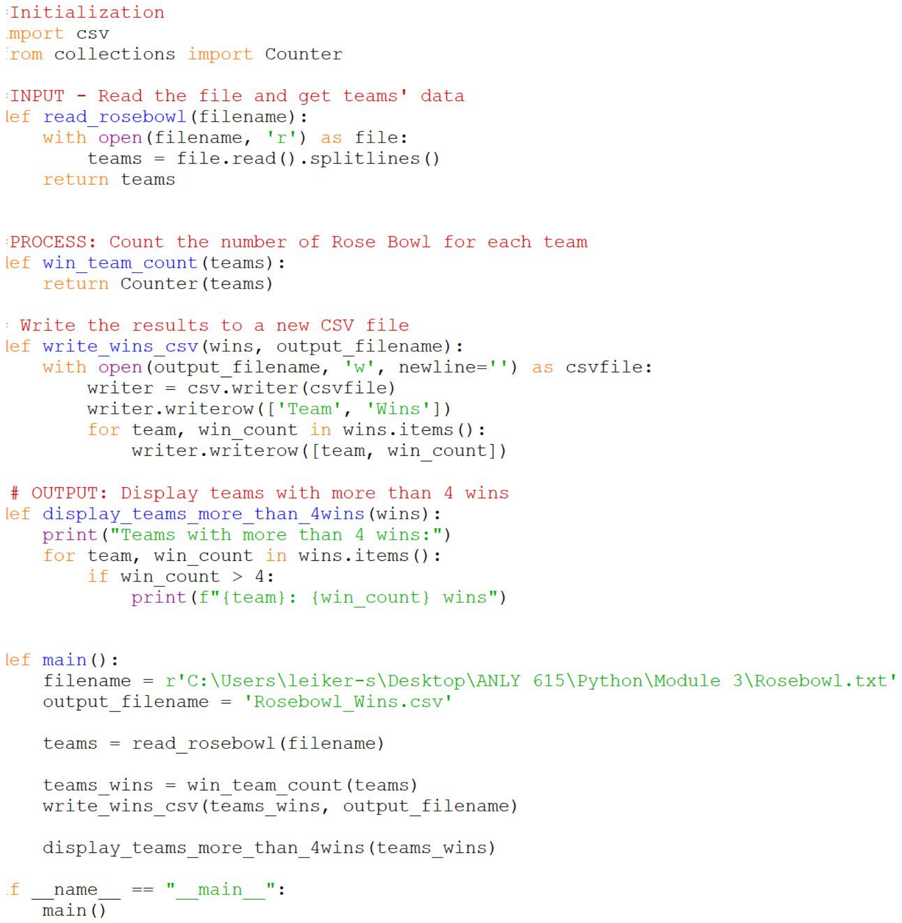
- Uses a counter to count how many times each team has won the Rose Bowl.
- **Outcome:** Identifies teams with the highest number of victories.

Saving Win Counts to CSV

- Writes the team names and their total wins to a new CSV file.
- **Outcome:** Creates a structured dataset for further analysis.

Displaying Teams with More Than Four Wins

- Filters and prints only teams that have won more than four times.
- **Outcome:** Highlights the most successful teams in Rose Bowl history.



```
Initialization
mport csv
rom collections import Counter

INPUT - Read the file and get teams' data
lef read_rosebowl(filename):
    with open(filename, 'r') as file:
        teams = file.read().splitlines()
    return teams


PROCESS: Count the number of Rose Bowl for each team
lef win_team_count(teams):
    return Counter(teams)

 Write the results to a new CSV file
lef write_wins_csv(wins, output_filename):
    with open(output_filename, 'w', newline='') as csvfile:
        writer = csv.writer(csvfile)
        writer.writerow(['Team', 'Wins'])
        for team, win_count in wins.items():
            writer.writerow([team, win_count])

# OUTPUT: Display teams with more than 4 wins
lef display_teams_more_than_4wins(wins):
    print("Teams with more than 4 wins:")
    for team, win_count in wins.items():
        if win_count > 4:
            print(f"{team}: {win_count} wins")


lef main():
    filename = r'C:\Users\leiker-s\Desktop\ANLY 615\Python\Module 3\Rosebowl.txt'
    output_filename = 'Rosebowl_Wins.csv'

    teams = read_rosebowl(filename)

    teams_wins = win_team_count(teams)
    write_wins_csv(teams_wins, output_filename)

    display_teams_more_than_4wins(teams_wins)

.f __name__ == "__main__":
    main()
```

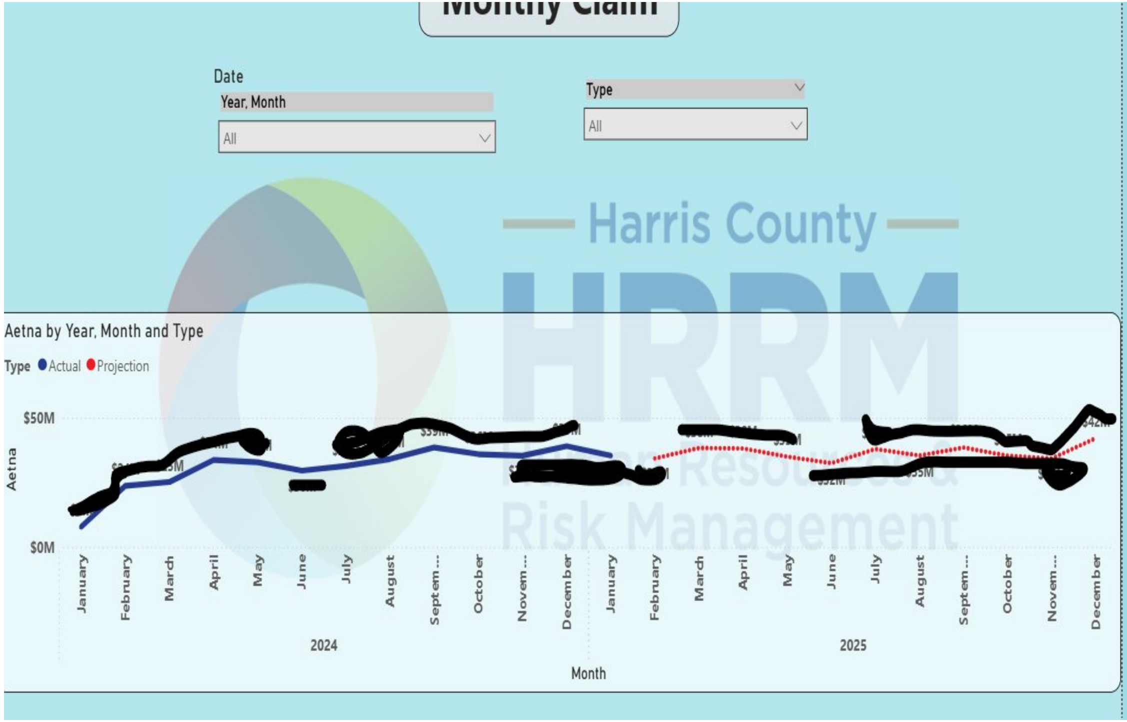
Power BI

Actual Financial Reports – Weekly, Monthly, Quarterly, Yearly

- Tracks real-time spending and revenue in healthcare and pharmacy operations.
- **Outcome:** Provides a structured financial overview for performance evaluation.

Future Projections – Medical & Pharmacy (Grants, Rebates, etc.)

- Uses historical data to forecast upcoming expenses, revenue, and funding sources.
- **Outcome:** Supports budgeting decisions and strategic planning for cost management



Monthly Claim

Date

Year, Month

All

Type

All

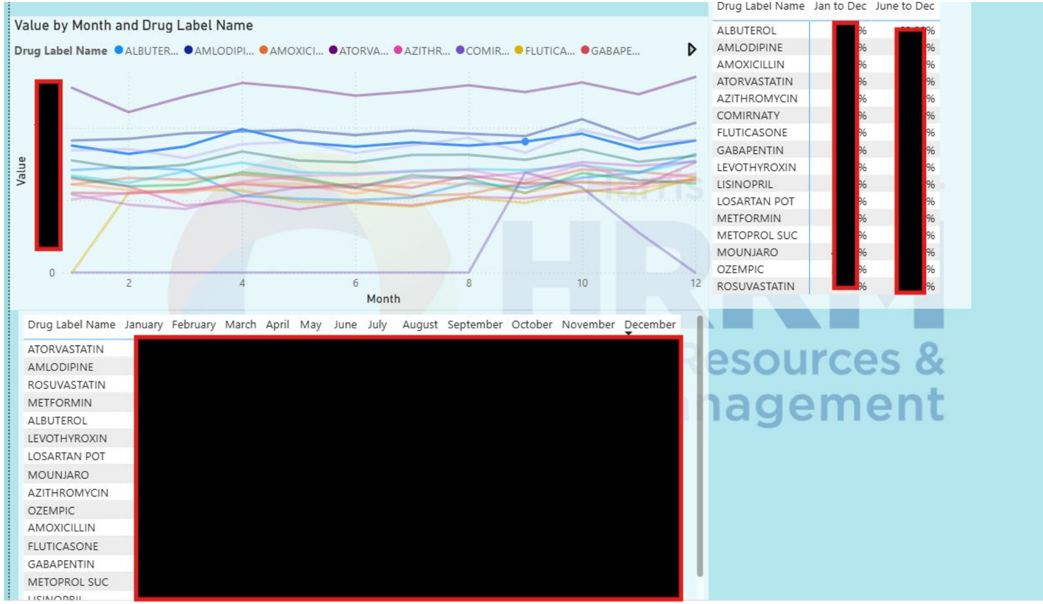
Power BI

Drug Name Identification & Inflation Impact

- Analyzes a list of medications, highlighting those affected by price inflation.
- **Outcome:** Identifies cost trends to support budgeting and policy adjustments.

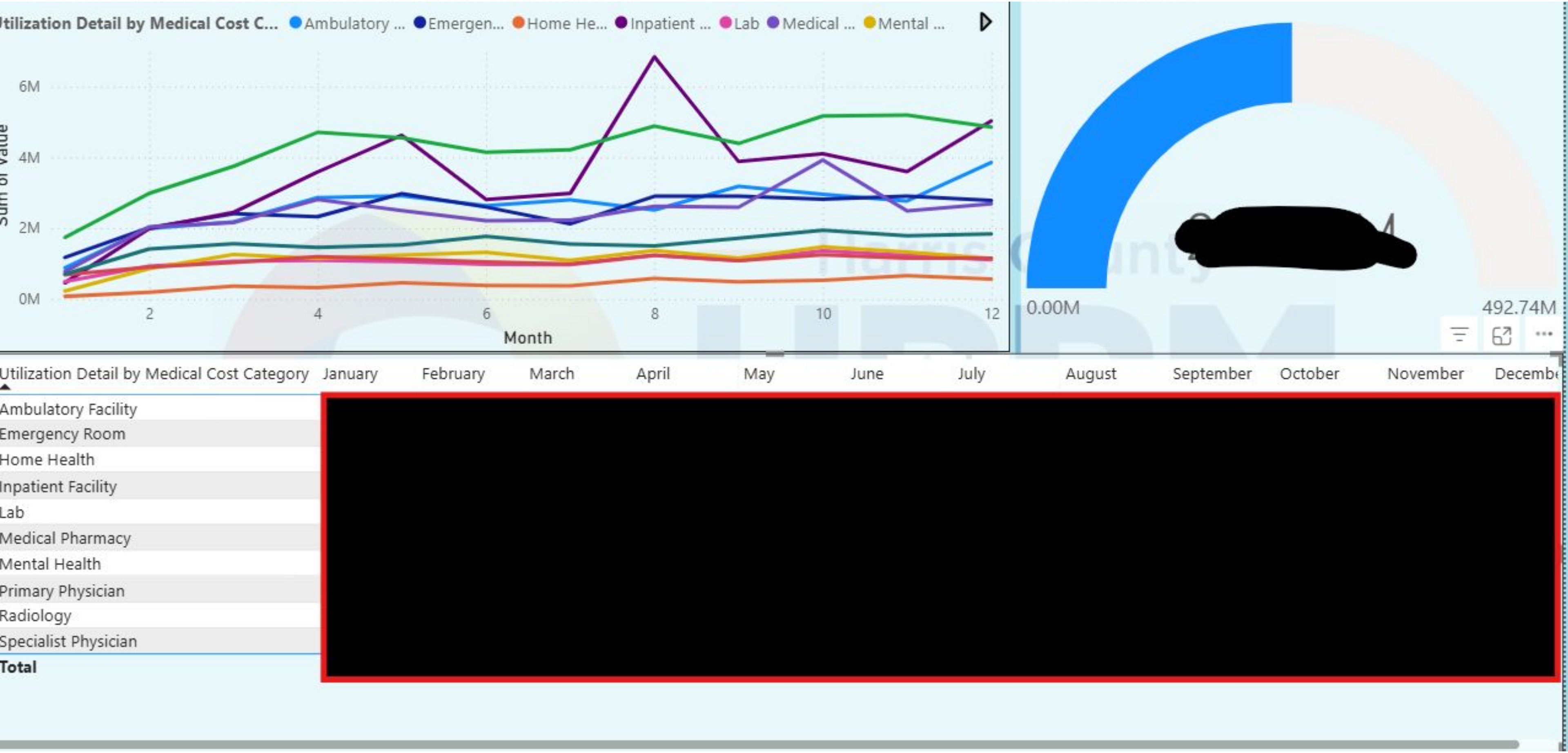
Seasonal Claims Increase & Dashboard Insights

- Tracks rising claims, especially during flu season in winter.
- **Outcome:** Uses charts and multiple dashboards to drive data-backed decisions.



Drug Label Name	Jan to Dec	June to Dec
ALBUTEROL	[redacted]%	[redacted]%
AMLODIPINE	[redacted]%	[redacted]%
AMOXICILLIN	[redacted]%	[redacted]%
ATORVASTATIN	[redacted]%	[redacted]%
AZITHROMYCIN	[redacted]%	[redacted]%
COMIRNATY	[redacted]%	[redacted]%
FLUTICASONE	[redacted]%	[redacted]%
GABAPENTIN	[redacted]%	[redacted]%
LEVOTHYROXIN	[redacted]%	[redacted]%
LISINOPRIL	[redacted]%	[redacted]%
LOSARTAN POT	[redacted]%	[redacted]%
METFORMIN	[redacted]%	[redacted]%
METOPROL SUC	[redacted]%	[redacted]%
MOUNJARO	[redacted]%	[redacted]%
OZEMPIC	[redacted]%	[redacted]%
ROSUVASTATIN	[redacted]%	[redacted]%

Drug Label Name	January	February	March	April	May	June	July	August	September	October	November	December
ATORVASTATIN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
AMLODIPINE	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ROSUVASTATIN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
METFORMIN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ALBUTEROL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LEVOTHYROXIN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LOSARTAN POT	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
MOUNJARO	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
AZITHROMYCIN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
OZEMPIC	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
AMOXICILLIN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
FLUTICASONE	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
GABAPENTIN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
METOPROL SUC	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LISINOPRIL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

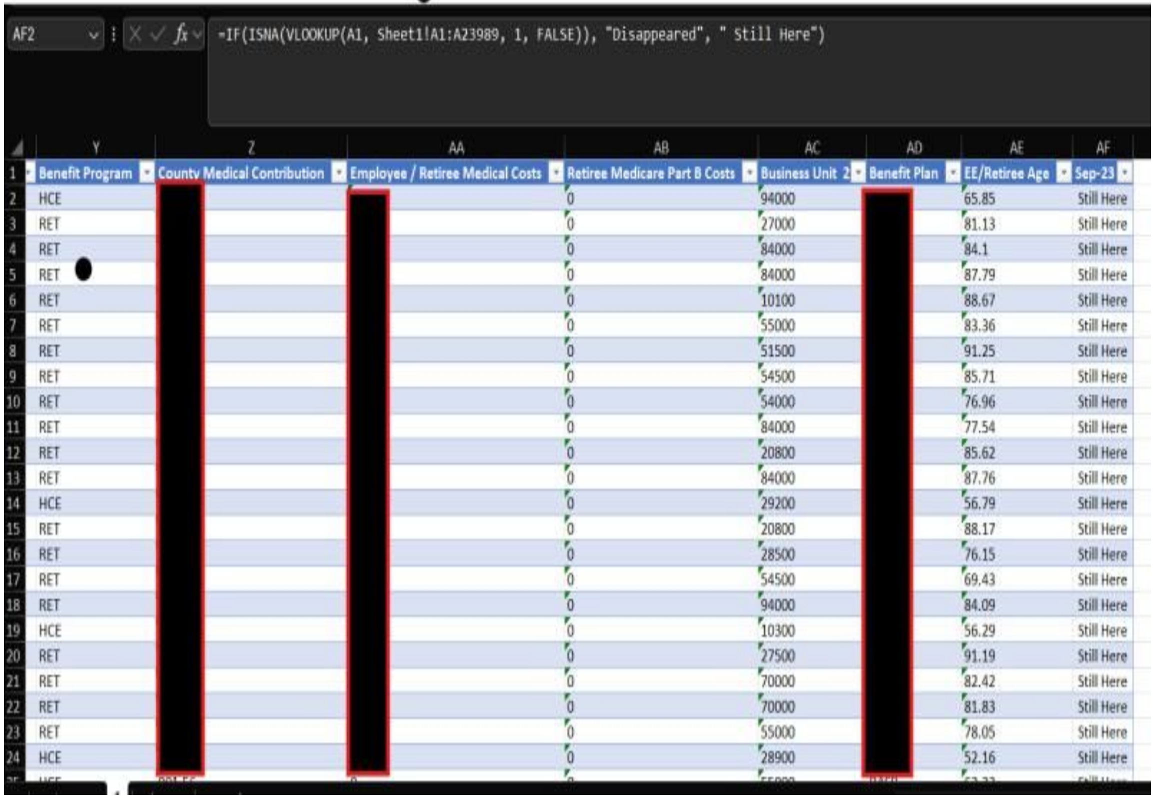


[redacted]

Utilization Detail by Medical Cost Category	January	February	March	April	May	June	July	August	September	October	November	Decembe
Ambulatory Facility	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Emergency Room	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Home Health	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Inpatient Facility	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Lab	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Medical Pharmacy	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Mental Health	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Primary Physician	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Radiology	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Specialist Physician	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

VLOOKUP

I use the VLOOKUP formula to match IDs and check if retirees and employees are still here in our company. This is just one of many ways I use VLOOKUP regularly.

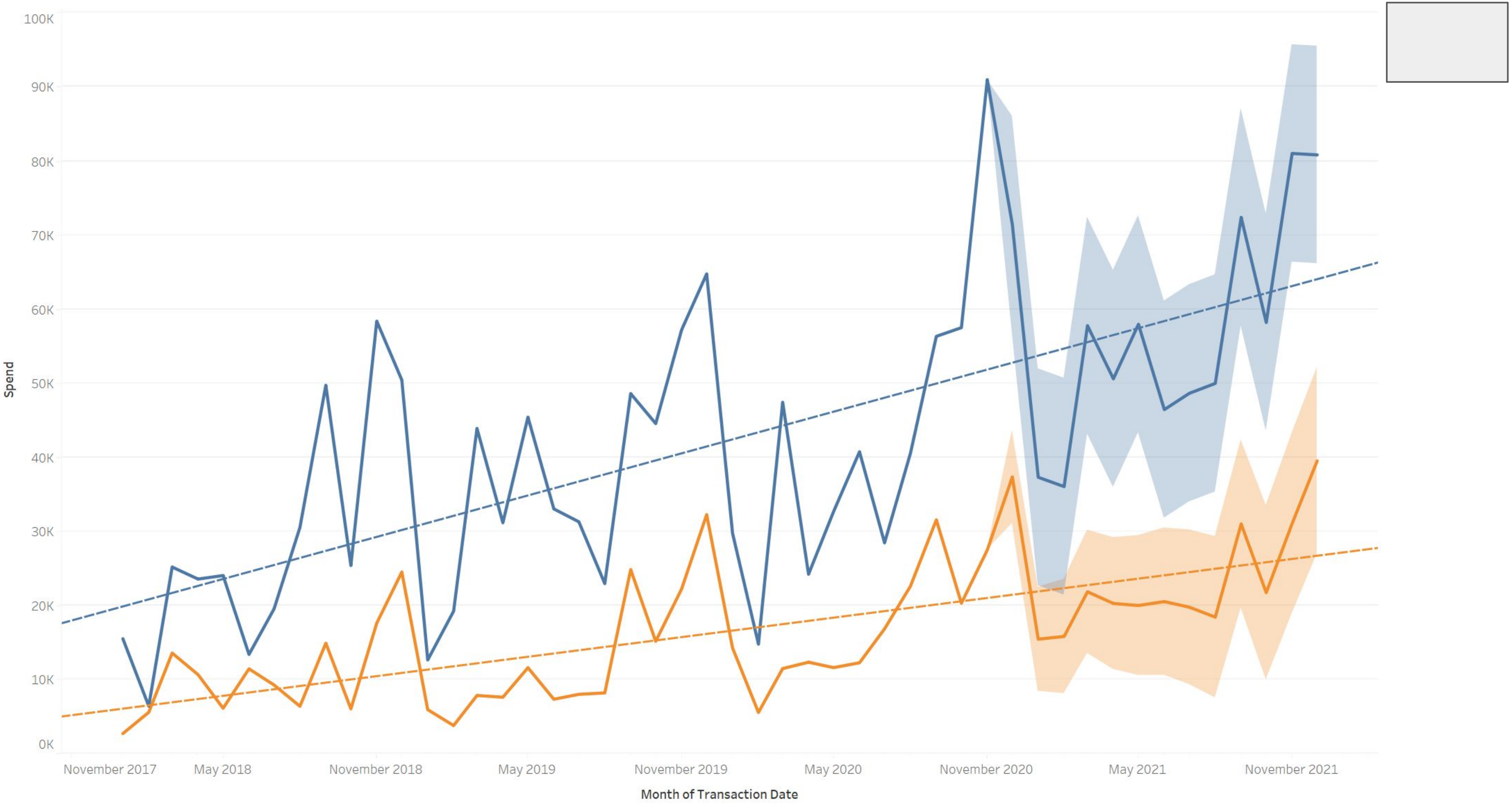


AF2

```
=IF(ISNA(VLOOKUP(A1, Sheet1!A1:A23989, 1, FALSE)), "Disappeared", " Still Here")
```

	Y	Z	AA	AB	AC	AD	AE	AF
1	Benefit Program	County Medical Contribution	Employee / Retiree Medical Costs	Retiree Medicare Part B Costs	Business Unit 2	Benefit Plan	EE/Retiree Age	Sep-23
2	HCE	[redacted]	[redacted]	0	94000	[redacted]	65.85	Still Here
3	RET	[redacted]	[redacted]	0	27000	[redacted]	81.13	Still Here
4	RET	[redacted]	[redacted]	0	84000	[redacted]	84.1	Still Here
5	RET	[redacted]	[redacted]	0	84000	[redacted]	87.79	Still Here
6	RET	[redacted]	[redacted]	0	10100	[redacted]	88.67	Still Here
7	RET	[redacted]	[redacted]	0	55000	[redacted]	83.36	Still Here
8	RET	[redacted]	[redacted]	0	51500	[redacted]	91.25	Still Here
9	RET	[redacted]	[redacted]	0	54500	[redacted]	85.71	Still Here
10	RET	[redacted]	[redacted]	0	54000	[redacted]	76.96	Still Here
11	RET	[redacted]	[redacted]	0	84000	[redacted]	77.54	Still Here
12	RET	[redacted]	[redacted]	0	20800	[redacted]	85.62	Still Here
13	RET	[redacted]	[redacted]	0	84000	[redacted]	87.76	Still Here
14	HCE	[redacted]	[redacted]	0	29200	[redacted]	56.79	Still Here
15	RET	[redacted]	[redacted]	0	20800	[redacted]	88.17	Still Here
16	RET	[redacted]	[redacted]	0	28500	[redacted]	76.15	Still Here
17	RET	[redacted]	[redacted]	0	54500	[redacted]	69.43	Still Here
18	RET	[redacted]	[redacted]	0	94000	[redacted]	84.09	Still Here
19	HCE	[redacted]	[redacted]	0	10300	[redacted]	56.29	Still Here
20	RET	[redacted]	[redacted]	0	27500	[redacted]	91.19	Still Here
21	RET	[redacted]	[redacted]	0	70000	[redacted]	82.42	Still Here
22	RET	[redacted]	[redacted]	0	70000	[redacted]	81.83	Still Here
23	RET	[redacted]	[redacted]	0	55000	[redacted]	78.05	Still Here
24	HCE	[redacted]	[redacted]	0	28900	[redacted]	52.16	Still Here

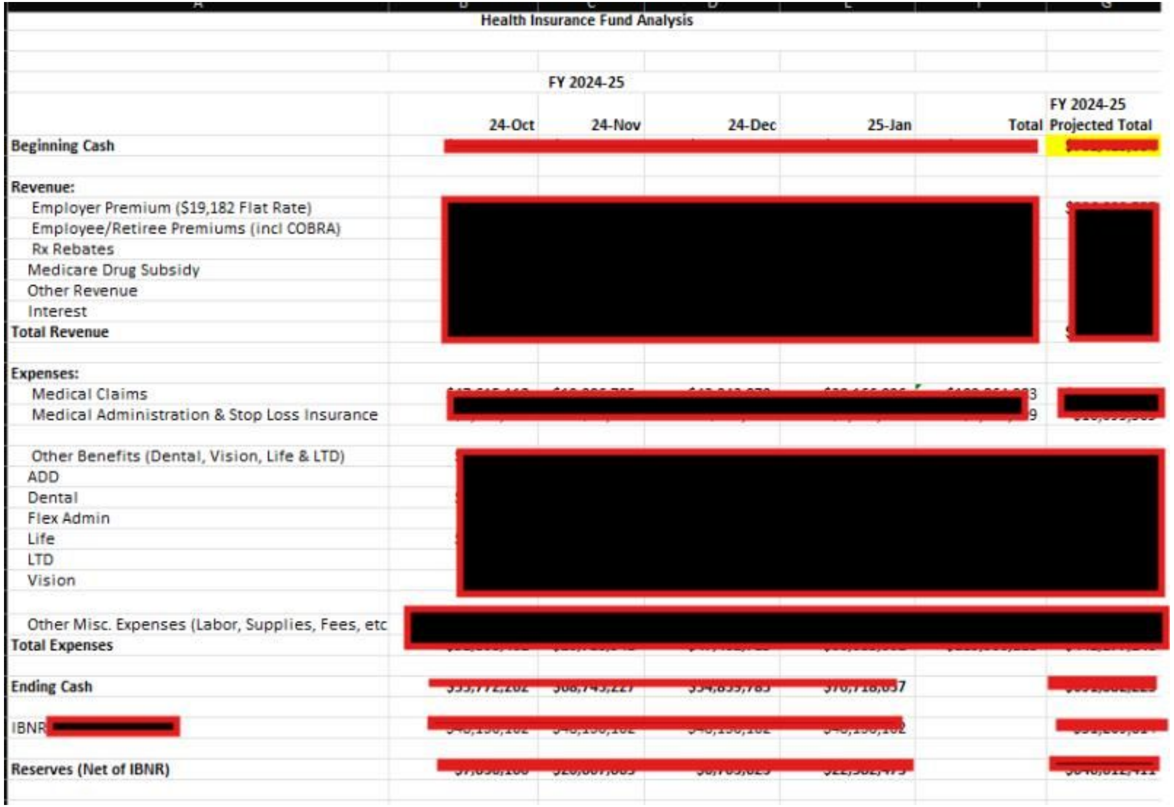
Line Chart



The trend of sum of Spend (actual & forecast) for Transaction Date Month. Color shows details about Category.

Healthcare Costs (Managerial Accounting)

Managerial accounting- Analyzing FY25 Healthcare Costs to improve budgeting and forecasting. Tracking enrollment trends helps ensure sustainable fundings.

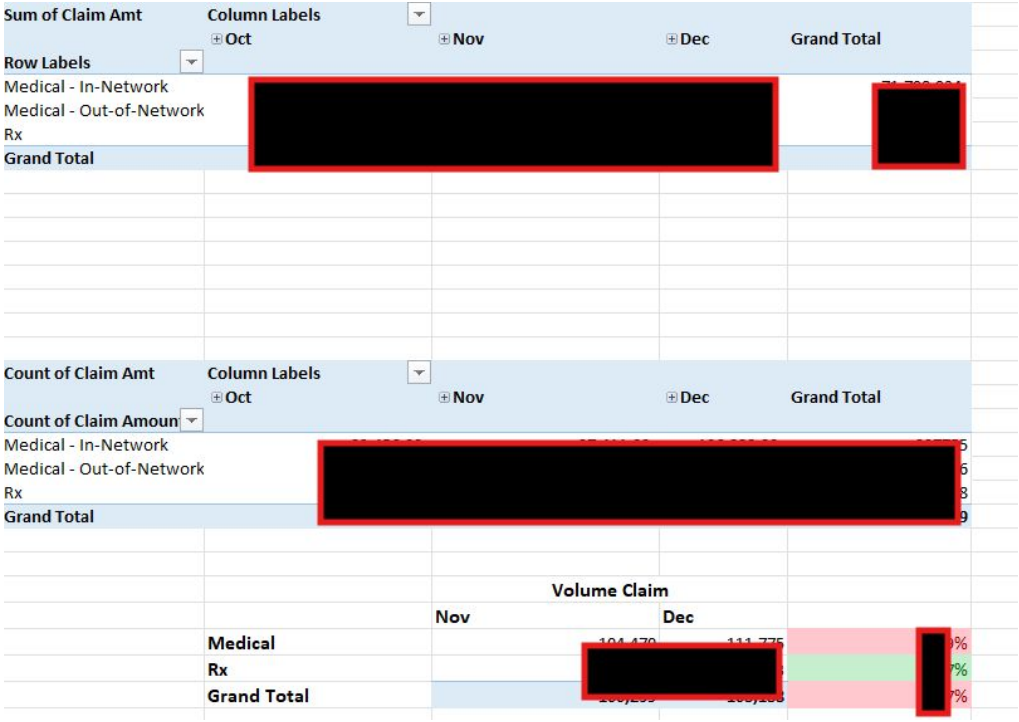


Health Insurance Fund Analysis

FY 2024-25

	24-Oct	24-Nov	24-Dec	25-Jan	Total	FY 2024-25 Projected Total
Beginning Cash	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Revenue:						
Employer Premium ($19,182 Flat Rate)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Employee/Retiree Premiums (incl COBRA)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Rx Rebates	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Medicare Drug Subsidy	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Other Revenue	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Interest	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Revenue	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Expenses:						
Medical Claims	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Medical Administration & Stop Loss Insurance	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Other Benefits (Dental, Vision, Life & LTD)	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ADD	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Dental	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Flex Admin	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Life	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LTD	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Vision	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Other Misc. Expenses (Labor, Supplies, Fees, etc	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Total Expenses	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Ending Cash	[redacted]	[redacted]	[redacted]	[redacted]		[redacted]
IBNR [redacted]	[redacted]	[redacted]	[redacted]	[redacted]		[redacted]
Reserves (Net of IBNR)	[redacted]	[redacted]	[redacted]	[redacted]		[redacted]

PivotChart + Pivot Table

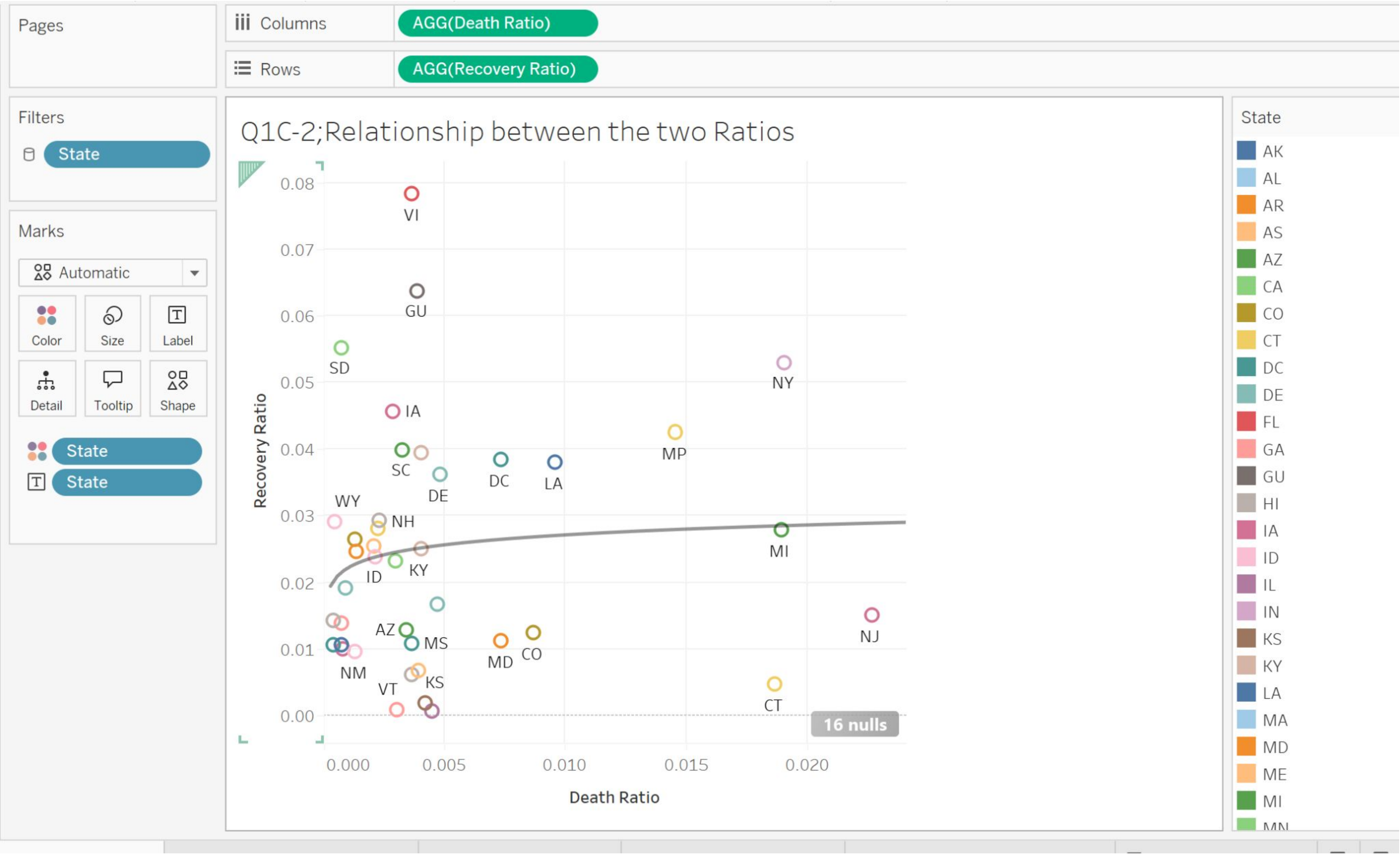


Sum of Claim Amt	Column Labels			
	⊞Oct	⊞Nov	⊞Dec	Grand Total
Row Labels				
Medical - In-Network	[redacted]	[redacted]	[redacted]	[redacted]
Medical - Out-of-Network	[redacted]	[redacted]	[redacted]	[redacted]
Rx	[redacted]	[redacted]	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]

Count of Claim Amt	Column Labels			
	⊞Oct	⊞Nov	⊞Dec	Grand Total
Count of Claim Amoun				
Medical - In-Network	[redacted]	[redacted]	[redacted]	[redacted]
Medical - Out-of-Network	[redacted]	[redacted]	[redacted]	[redacted]
Rx	[redacted]	[redacted]	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]	[redacted]

Volume Claim

	Nov	Dec	
Medical	[redacted]	[redacted]	[redacted]
Rx	[redacted]	[redacted]	[redacted]
Grand Total	[redacted]	[redacted]	[redacted]



Columns: AGG(Death Ratio)

Rows: AGG(Recovery Ratio)

Filters: State

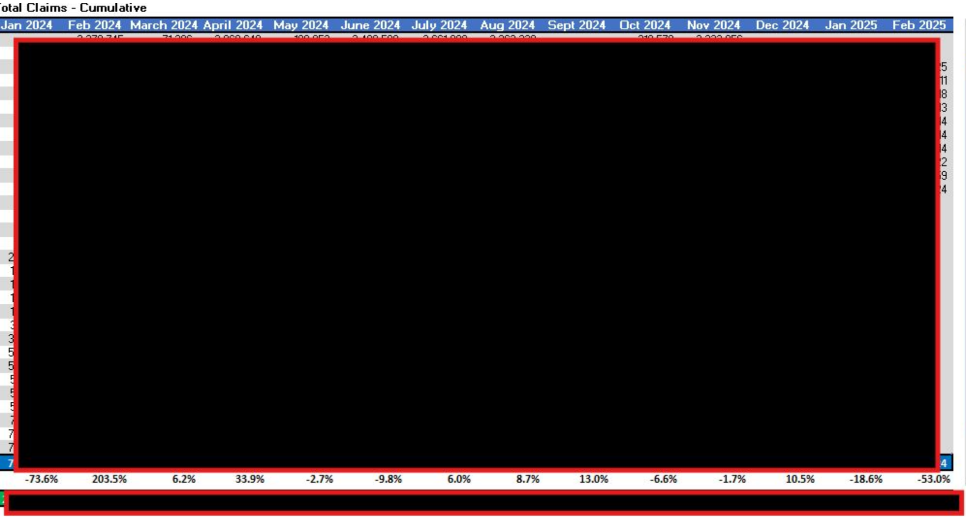
Marks: Automatic

State

State

Q1C-2;Relationship between the two Ratios

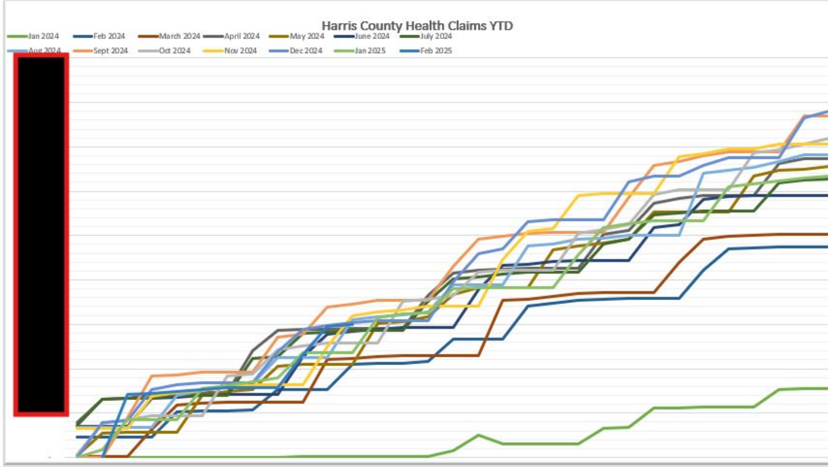
Pivot Table & Chart



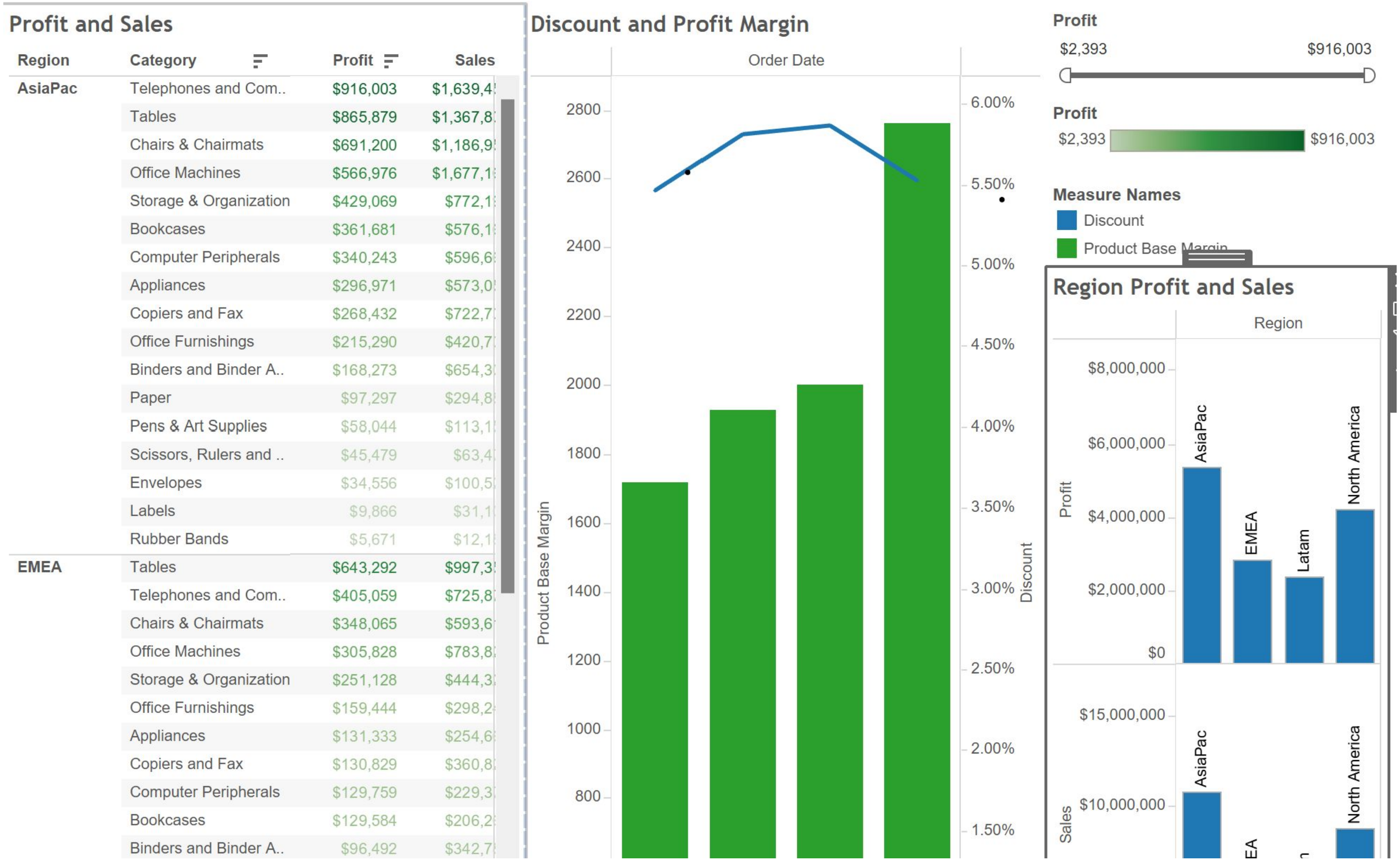
otal Claims - Cumulative

Jan 2024	Feb 2024	March 2024	April 2024	May 2024	June 2024	July 2024	Aug 2024	Sept 2024	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
-73.6%	203.5%	6.2%	33.9%	-2.7%	-9.8%	6.0%	8.7%	13.0%	-6.6%	-1.7%	10.5%	-18.6%	-53.0%

[redacted]



[redacted]



Profit and Sales

Region	Category	Profit	Sales
AsiaPac	Telephones and Com..	$916,003	$1,639,4
	Tables	$865,879	$1,367,8
	Chairs & Chairmats	$691,200	$1,186,9
	Office Machines	$566,976	$1,677,1
	Storage & Organization	$429,069	$772,1
	Bookcases	$361,681	$576,1
	Computer Peripherals	$340,243	$596,6
	Appliances	$296,971	$573,0
	Copiers and Fax	$268,432	$722,7
	Office Furnishings	$215,290	$420,7
	Binders and Binder A..	$168,273	$654,3
	Paper	$97,297	$294,8
	Pens & Art Supplies	$58,044	$113,1
	Scissors, Rulers and ..	$45,479	$63,4
	Envelopes	$34,556	$100,5
	Labels	$9,866	$31,1
	Rubber Bands	$5,671	$12,1
EMEA	Tables	$643,292	$997,3
	Telephones and Com..	$405,059	$725,8
	Chairs & Chairmats	$348,065	$593,6
	Office Machines	$305,828	$783,8
	Storage & Organization	$251,128	$444,3
	Office Furnishings	$159,444	$298,2
	Appliances	$131,333	$254,6
	Copiers and Fax	$130,829	$360,8
	Computer Peripherals	$129,759	$229,3
	Bookcases	$129,584	$206,2
	Binders and Binder A..	$96,492	$342,7

Discount and Profit Margin

Profit

$2,393 $916,003

Profit

$2,393 $916,003

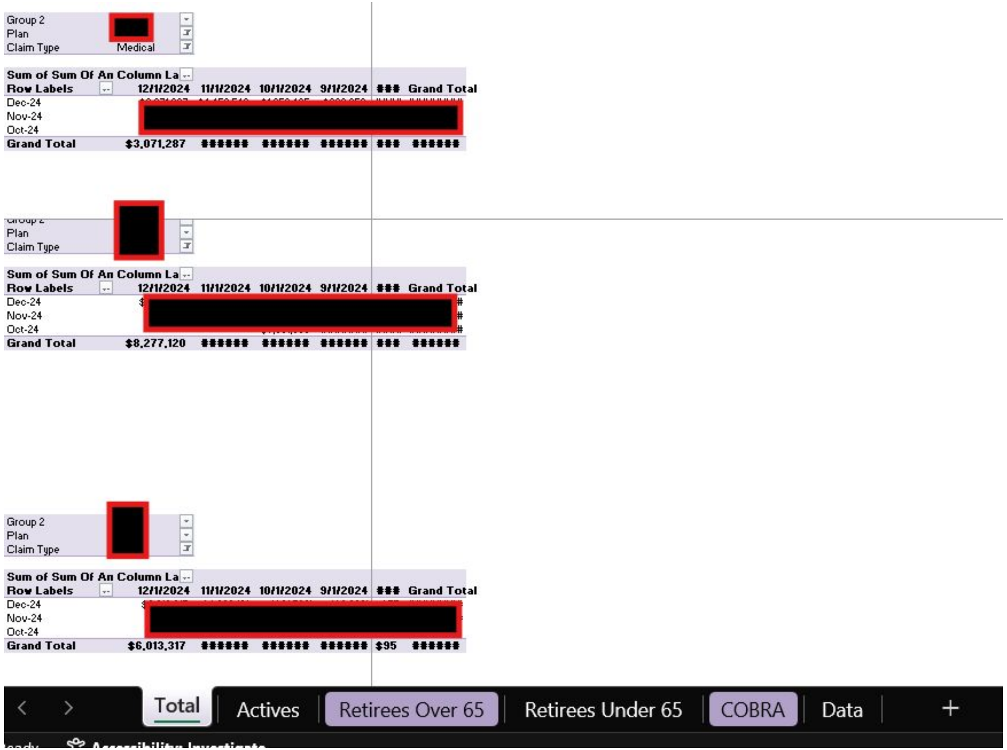
Measure Names

🟦 Discount

🟩 Product Base Margin

Region Profit and Sales

Pivot Table



Group 2	[redacted]
Plan	
Claim Type	Medical

Sum of Sum Of An	Column La					
Row Labels	12/1/2024	11/1/2024	10/1/2024	9/1/2024	###	Grand Total
Dec-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Nov-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Oct-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grand Total	$3,071,287	######	######	######	###	######

Group 2	[redacted]
Plan	
Claim Type	

Sum of Sum Of An	Column La					
Row Labels	12/1/2024	11/1/2024	10/1/2024	9/1/2024	###	Grand Total
Dec-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	#
Nov-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	#
Oct-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	#
Grand Total	$8,277,120	######	######	######	###	######

Group 2	[redacted]
Plan	
Claim Type	

Sum of Sum Of An	Column La					
Row Labels	12/1/2024	11/1/2024	10/1/2024	9/1/2024	###	Grand Total
Dec-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Nov-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Oct-24	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Grand Total	$6,013,317	######	######	######	$95	######

Power BI

Actual Sales Volume

- Analyzes total sales transactions over a specific period.
- **Outcome:** Measures real-time business performance based on actual sales data.

Monthly Earnings Calculation

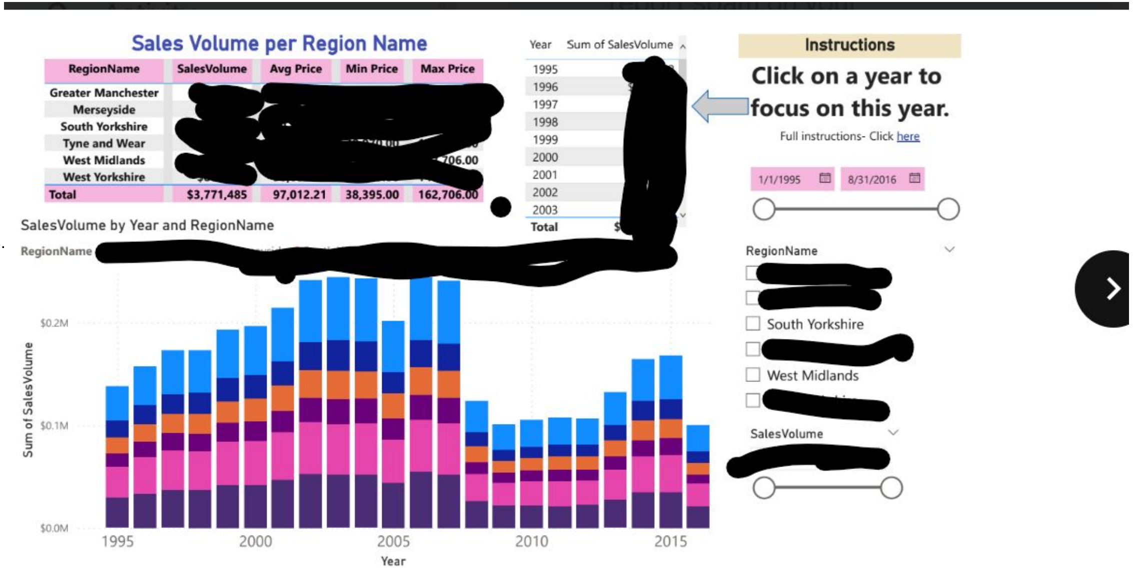
- Aggregates revenue earned per month from recorded sales.
- **Outcome:** Tracks financial trends and identifies seasonal variations.

Yearly Earnings Analysis

- Sums up total revenue for each year to compare long-term growth.
- **Outcome:** Evaluates annual performance and supports strategic planning.

Forecasting Future Revenue

- Uses past sales data to predict upcoming earnings.
- **Outcome:** Helps structure financial goals and resource allocation.



Sales Volume per Region Name

RegionName	SalesVolume	Avg Price	Min Price	Max Price
Greater Manchester	[redacted]	[redacted]	[redacted]	[redacted]
Merseyside	[redacted]	[redacted]	[redacted]	[redacted]
South Yorkshire	[redacted]	[redacted]	[redacted]	[redacted]
Tyne and Wear	[redacted]	[redacted]	[redacted]	[redacted]
West Midlands	[redacted]	[redacted]	[redacted]	[redacted]
West Yorkshire	[redacted]	[redacted]	[redacted]	[redacted]
Total	$3,771,485	97,012.21	38,395.00	162,706.00

Year	Sum of SalesVolume
1995	[redacted]
1996	[redacted]
1997	[redacted]
1998	[redacted]
1999	[redacted]
2000	[redacted]
2001	[redacted]
2002	[redacted]
2003	[redacted]
Total	[redacted]

Instructions

Click on a year to focus on this year.

Full instructions- Click here

1/1/1995 8/31/2016

RegionName

□ [redacted]
□ [redacted]
□ South Yorkshire
□ [redacted]
□ West Midlands
□ [redacted]

SalesVolume

[redacted]

SalesVolume by Year and RegionName

RegionName [redacted]

Power BI

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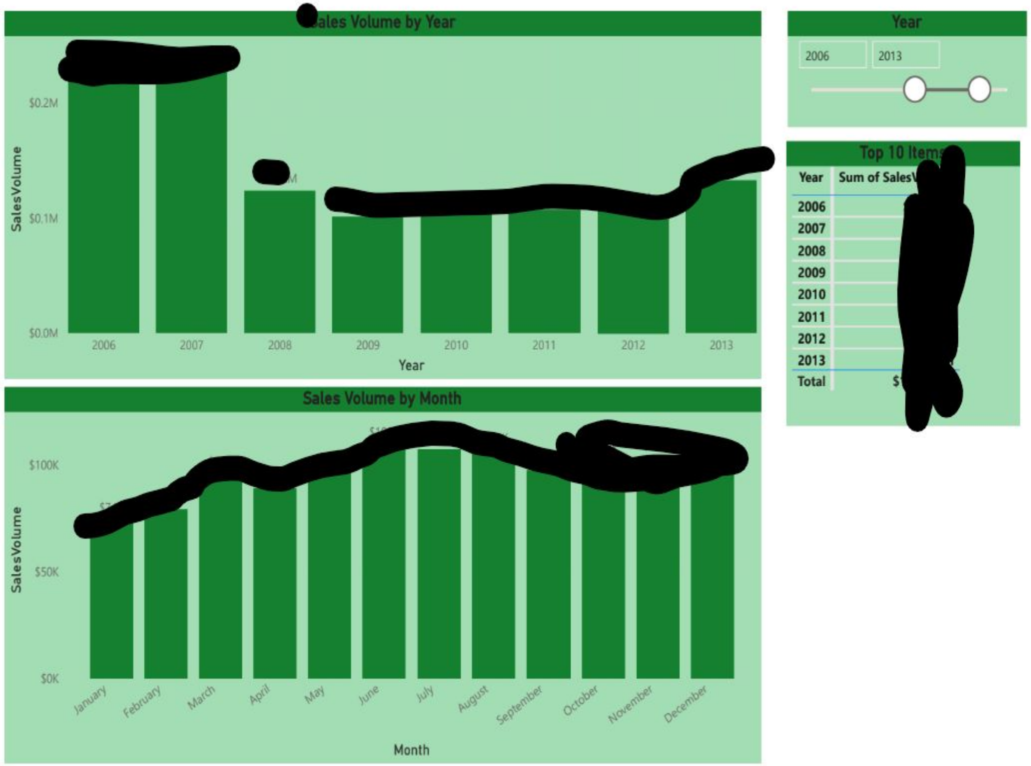


Top 10 Items

Year	Sum of Sales[redacted]
2006	[redacted]
2007	[redacted]
2008	[redacted]
2009	[redacted]
2010	[redacted]
2011	[redacted]
2012	[redacted]
2013	[redacted]
Total	[redacted]

Power BI

Top Sales Locations

- Identifies the locations with the highest total sales.
- **Outcome:** Pinpoints the most profitable areas for business growth.

Yearly Sales Performance

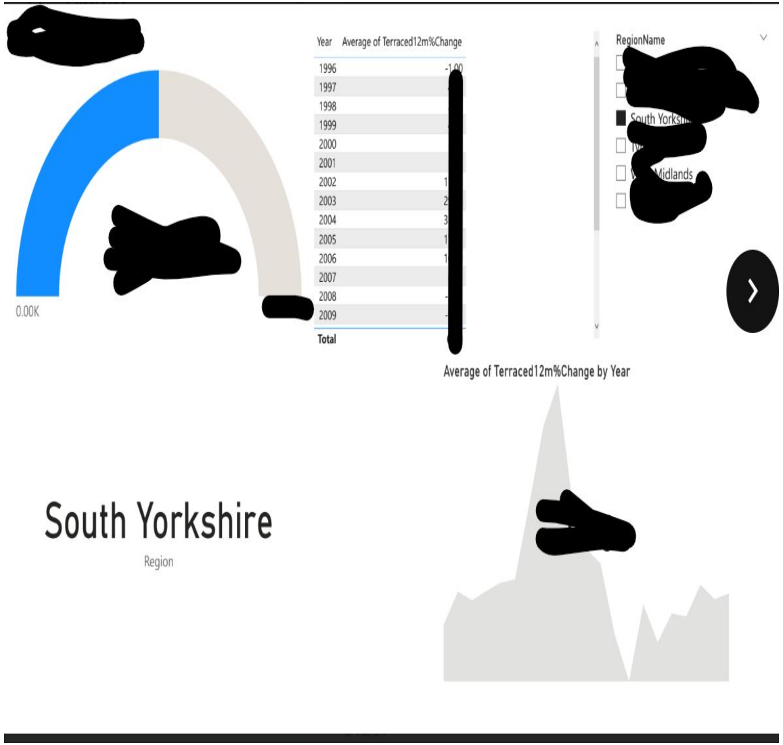
- Aggregates total sales for each year.
- **Outcome:** Evaluates long-term trends and revenue consistency.

Sales Distribution by Region

- Compares sales performance across different locations.
- **Outcome:** Helps optimize resource allocation and marketing strategies.

Future Sales Forecasting

- Uses past yearly sales data to predict future revenue trends.
- **Outcome:** Supports strategic decision-making for expansion and investment.



[redacted]

[redacted]

[redacted]

Year	Average of Terraced12m%Change
1996	[redacted]
1997	[redacted]
1998	[redacted]
1999	[redacted]
2000	[redacted]
2001	[redacted]
2002	[redacted]
2003	[redacted]
2004	[redacted]
2005	[redacted]
2006	[redacted]
2007	[redacted]
2008	[redacted]
2009	[redacted]
Total	[redacted]

RegionName

[redacted]

[redacted]

South Yorkshire
Region

Tableau

Customer Demographics & Average Age

- Analyzes customer age distribution and key demographic trends.
- **Outcome:** Provides insights into the bank's target audience and customer segments.

Lifestyle & Financial Product Usage

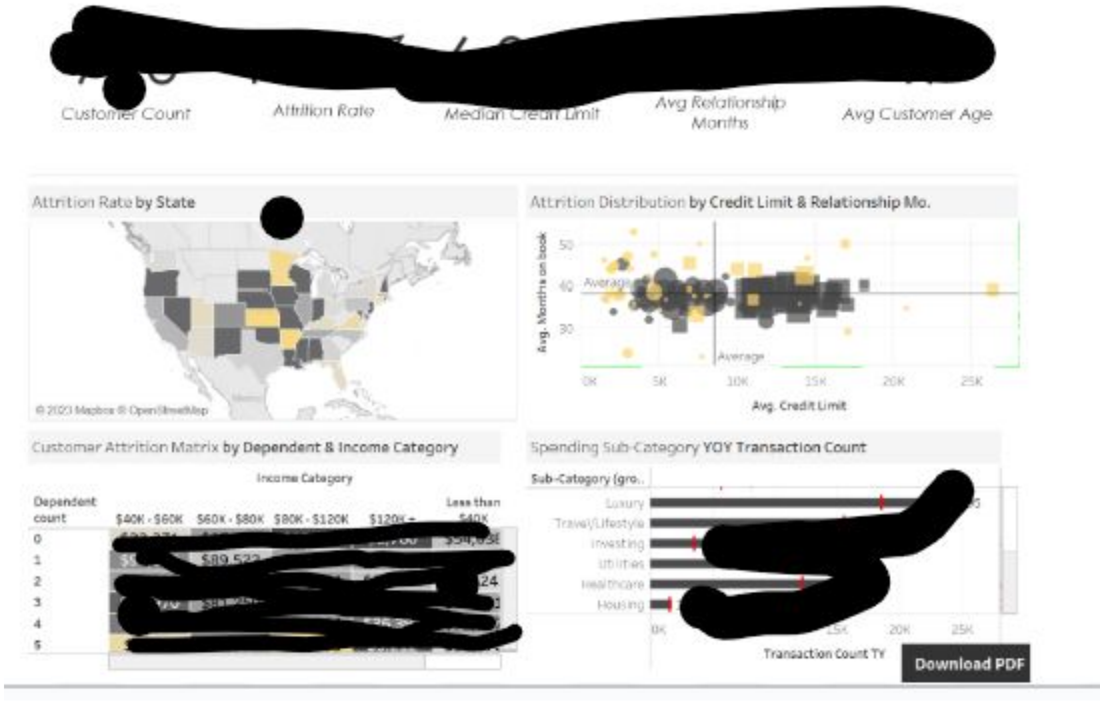
- Examines customer spending habits, travel expenses, and loan preferences.
- **Outcome:** Identifies which financial services (loans, credit cards, travel perks) are most popular.

Top States with the Most Customers

- Ranks states based on customer concentration and banking activity.
- **Outcome:** Helps in regional expansion and targeted financial services.

Credit Usage & Debt Patterns

- Evaluates how much credit customers use and their repayment behaviors.
- **Outcome:** Assists in risk assessment and customized financial product offerings.



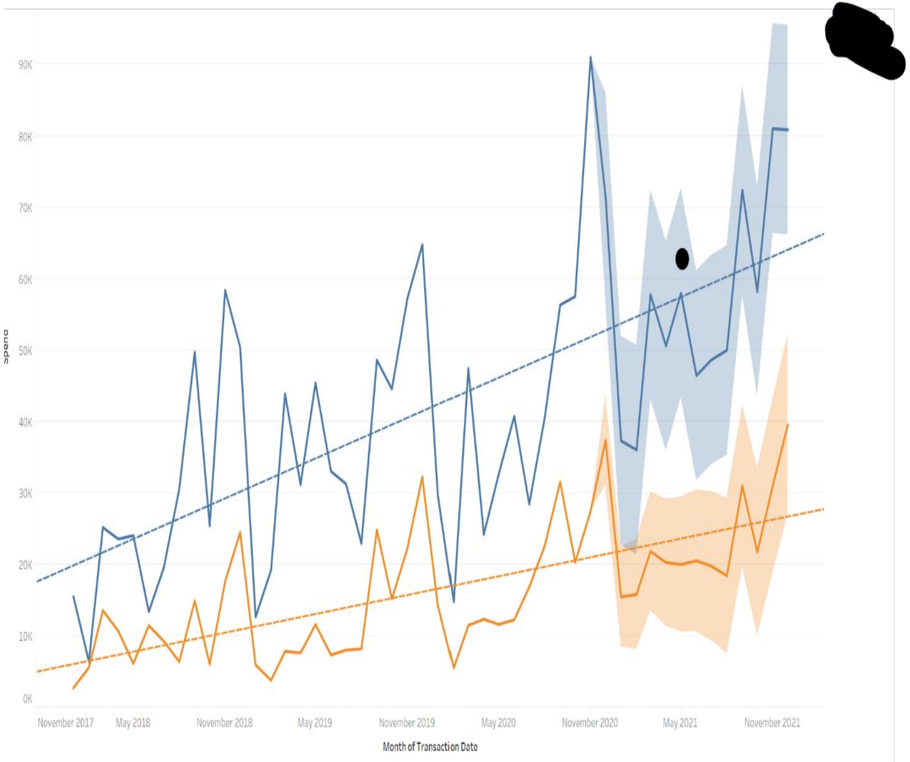
Tableau

Historical Data Collection

- Analyzes Rose Bowl winners from **1902 to 2020** to track long-term trends.
- **Outcome:** Establishes a structured historical dataset for performance analysis.

Forecasting Future Trends

- Uses past wins to identify dominant teams and predict future success.
- **Outcome:** Helps measure patterns and build a structured forecast for upcoming years.



[redacted]