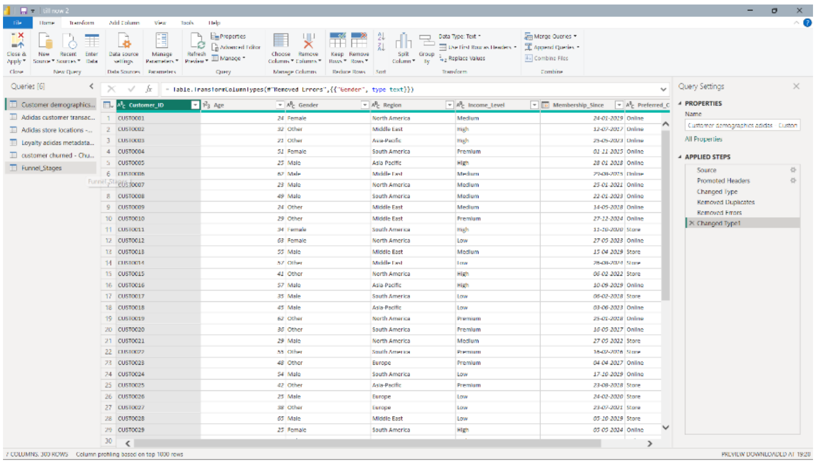
Retail customer Retention Analytics – ADIDAS(using power bi)

Task-1

Steps followed-

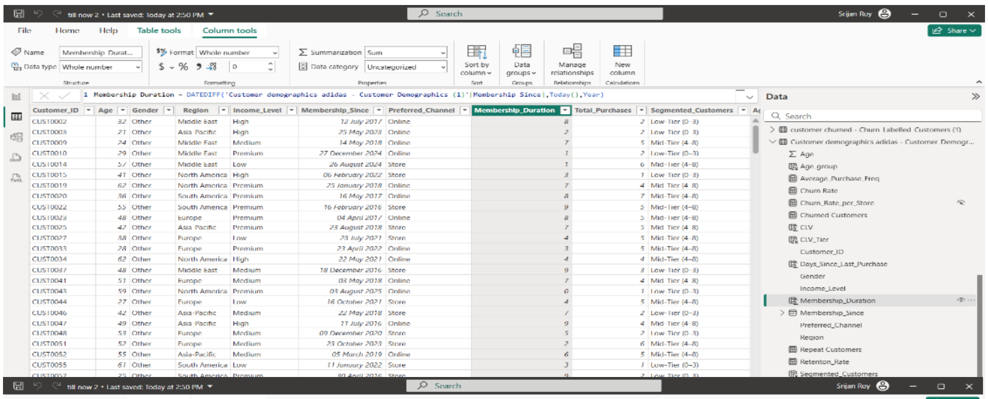
1. Removed duplicate rows, errors and ensured correct datatypes for all tables

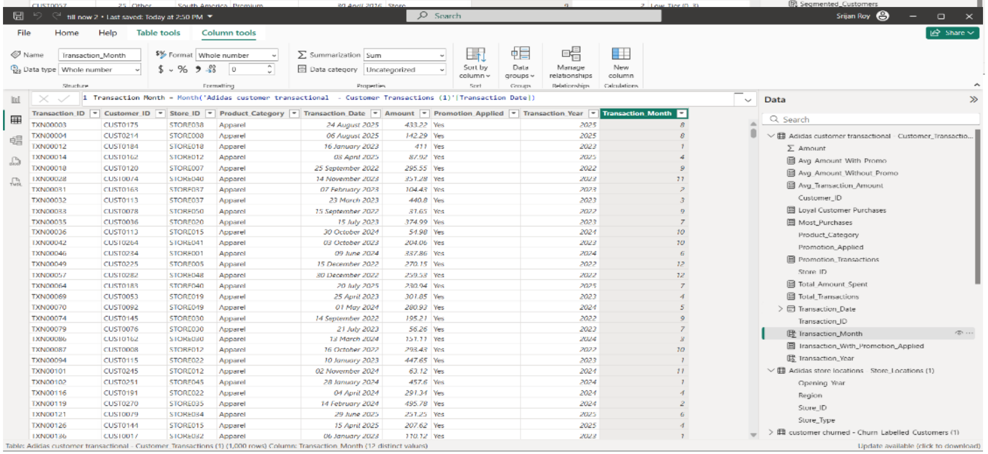


2.Created Three calculated columns Membership_Duration, Transaction_year, Transaction_Month

DAX Used- 1. Membership_Duration = DATEDIFF('Customer demographics adidas - Customer_Demographics (1)'[Membership_Since],Today(),Year)

2. Transaction_Month = Month('Adidas customer transactional - Customer_Transactions (1)'[Transaction_Date])
3. `Transaction_Year = Year('Adidas customer transactional  - Customer_Transactions (1)'[Transaction_Date])`





Task-2

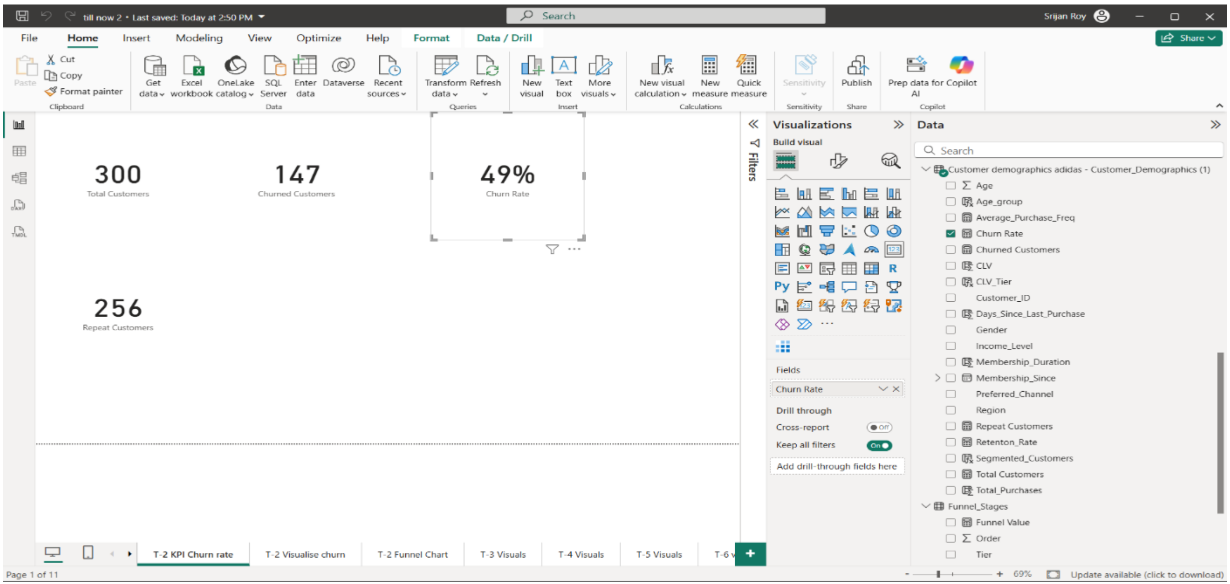
Steps followed-

- Created 4 different measures named Churn rate, Churn Customers, Repeat Customers and Total Customers with following Daxes.

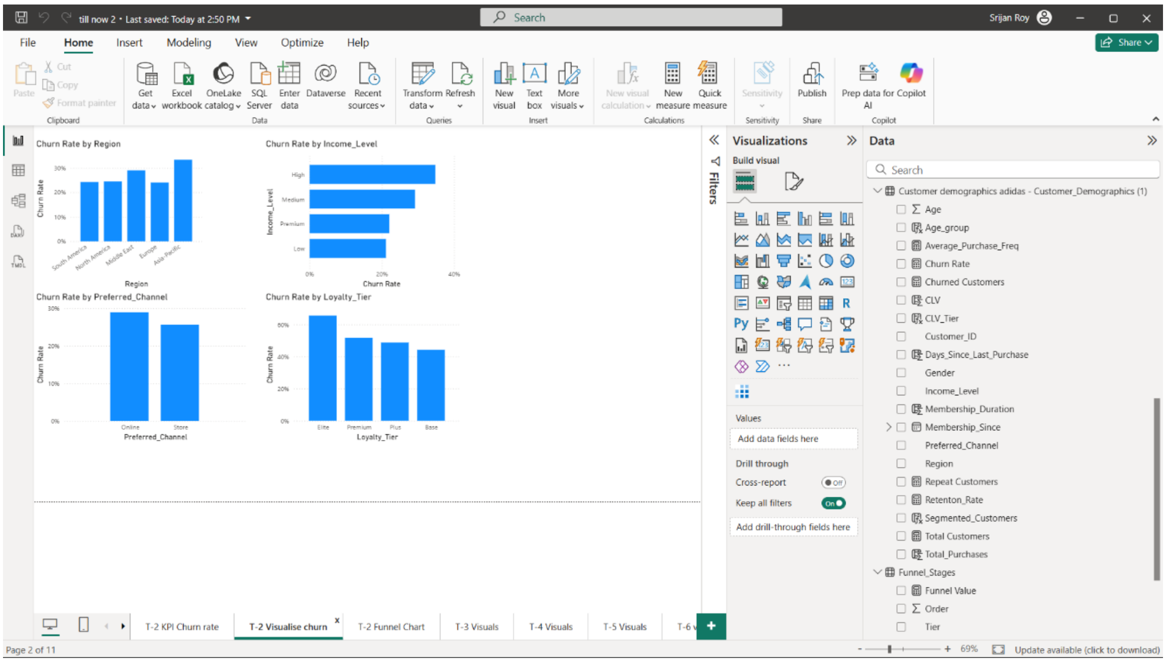
DAX used-

1. Churn Rate = DIVIDE([Churned Customers],[Total Customers])*100/100
2. Churned Customers = CALCULATE(DISTINCTCOUNT('customer churned - Churn_Labelled_Customers (1)'[Customer_ID]),'customer churned - Churn_Labelled_Customers (1)'[Churn_Flag]=1)
3. Total Customers = DISTINCTCOUNT('Customer demographics adidas - Customer_Demographics (1)'[Customer_ID])
4. Repeat Customers = VAR Who= SUMMARIZE('Adidas customer transactional - Customer_Transactions (1)','Adidas customer transactional - Customer_Transactions (1)'[Customer_ID],"Aight",COUNTROWS('Adidas customer transactional - Customer_Transactions (1)')) VAR Stm= FILTER(Who,[Aight]>1) RETURN COUNTROWS(Stm)

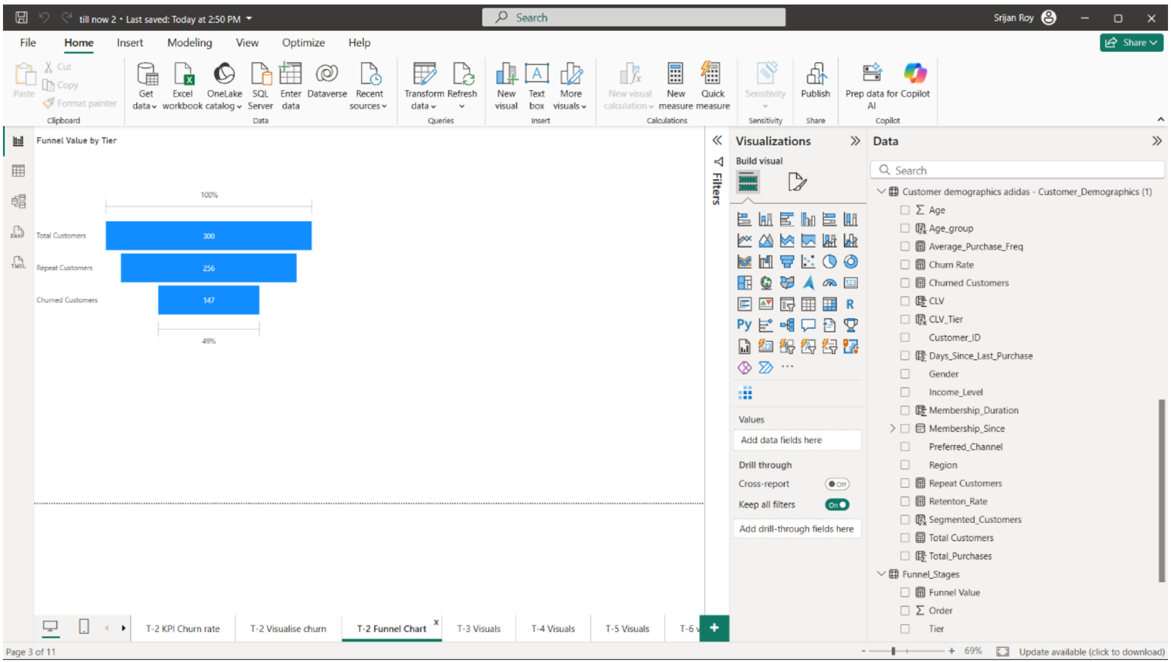
- Created 4 card visuals then put all those measures in them which are now my Kpis.
- Visualised churn rate using different charts.
- Created funnel stages and funnel chart.



Churn rate visuals:



Funnel chart:



Task-3

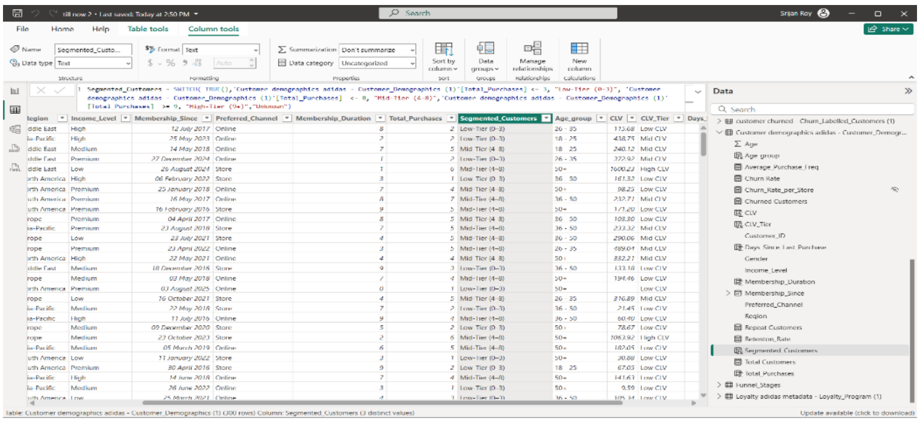
Steps followed-

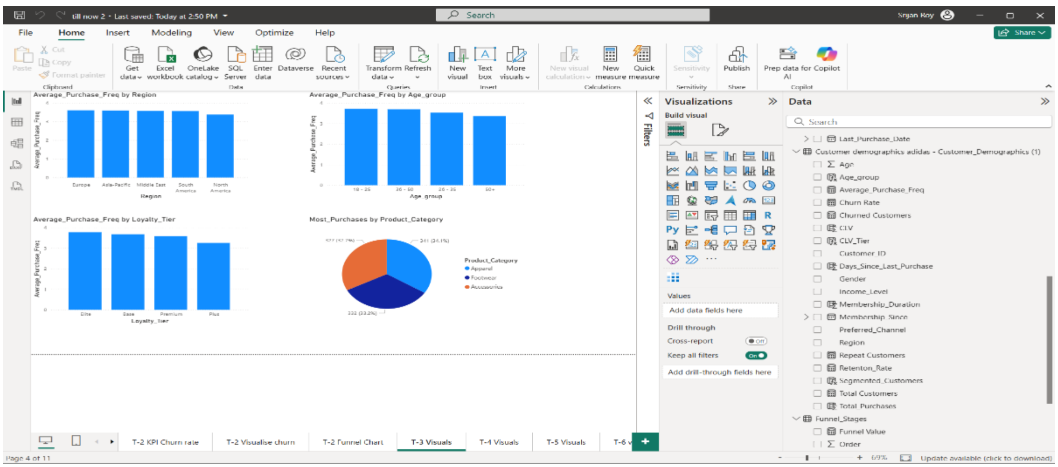
- Created a calculated Column as Segmented_Customers in customer demographics dataset where we Segmented customers in three different tiers "Low-Tier (0–3)", "Mid-Tier (4–8)" and "High-Tier (9+)"
- Crated a measure named avg_purchase_freq and visualize it by region, age group, loyalty tier using different charts

  DAX Used-

  1. `Segmented_Customers = SWITCH(TRUE(),'Customer demographics adidas - Customer_Demographics (1)'[Total_Purchases] <= 3, "Low-Tier (0-3)",'Customer demographics adidas - Customer_Demographics (1)'[Total_Purchases] <= 8, "Mid-Tier (4-8)",'Customer demographics adidas - Customer_Demographics (1)'[Total_Purchases] >= 9, "High-Tier (9+)","Unknown")`
  2. `Average_Purchase_Freq = AVERAGEX(VALUES('Customer demographics adidas - Customer_Demographics (1)'[Customer_ID]),CALCULATE(COUNTROWS('Adidas customer transactional  - Customer_Transactions (1)')))`

*****MOST PURCHASED PRODUCT BY LOYAL CUSTOMERS =APPAREL**





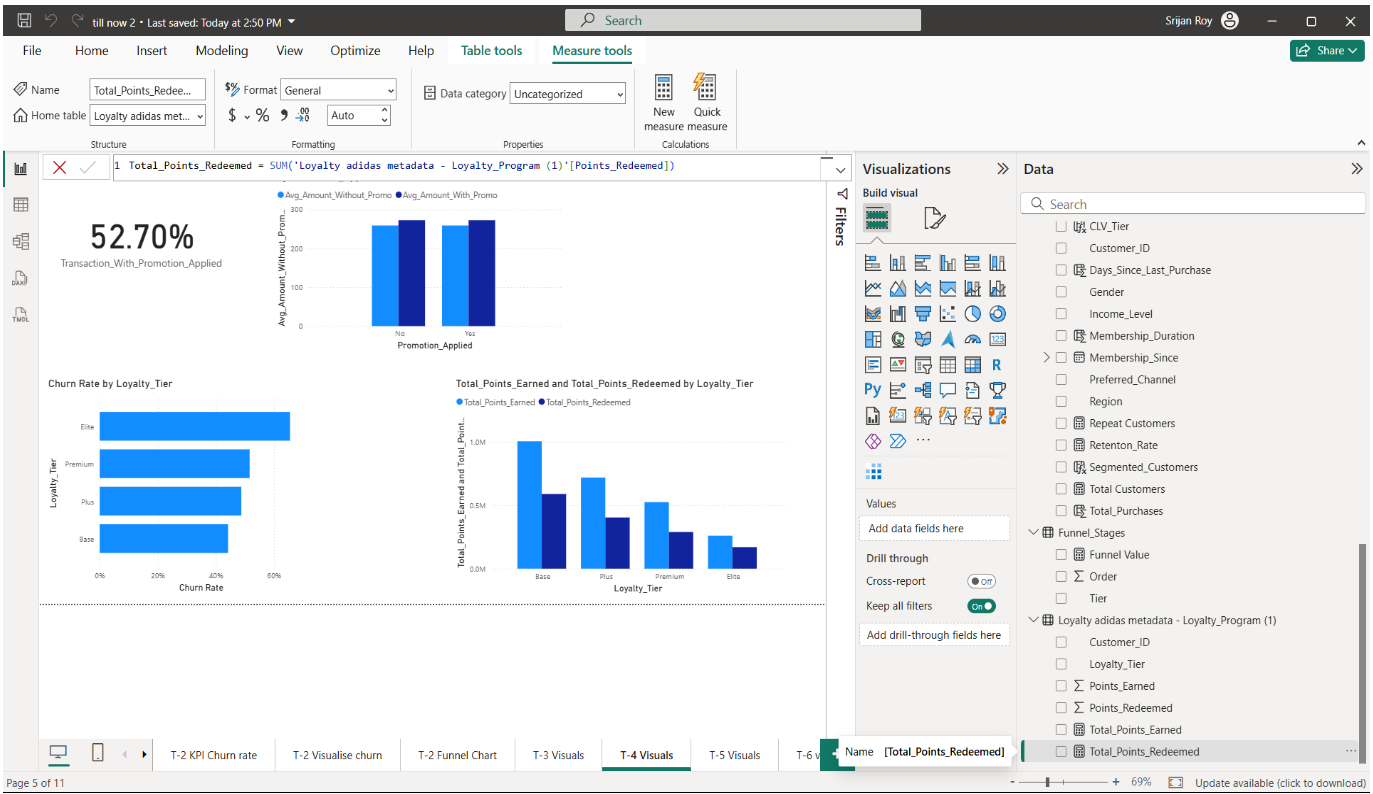
Task-4

Steps followed-

- Created a measure Transaction_With_Promotion_Applied = DIVIDE([Promotion_Transactions],[Total_Transactions])
  And visualized it using card visual
- Created two different measures Avg. purchase amount with vs without promos and compare them using clustered column chart
- Visualised churn rate across loyalty tier
- Created two different measures , “points_earned” and “points _redeemed” and compare them across loyalty tier using clustered column chart

DAX Used-

1. `Avg_Amount_With_Promo = CALCULATE(AVERAGE('Adidas customer transactional - Customer_Transactions (1)'[Amount]),'Adidas customer transactional - Customer_Transactions (1)'[Promotion_Applied]="Yes")`
2. `Avg_Amount_Without_Promo = CALCULATE(AVERAGE('Adidas customer transactional - Customer_Transactions (1)'[Amount]),'Adidas customer transactional - Customer_Transactions (1)'[Promotion_Applied]="No")`
3. `Total_Points_Earned = SUM('Loyalty adidas metadata - Loyalty_Program (1)'[Points_Earned])`
4. `Total_Points_Redeemed = SUM('Loyalty adidas metadata - Loyalty_Program (1)'[Points_Redeemed])`



Recommendations to improve redemption & retention-

1. I'd suggest to increase rewards & awareness for that said rewards like customers aren't aware enough that they have unused points left so we can use reminders to let them know

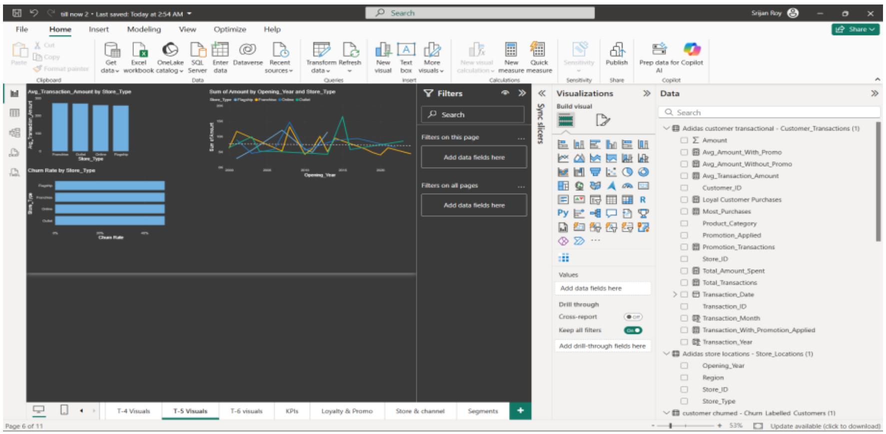
2. Reduce hassle during transactions and redemptions and make it more fluid.

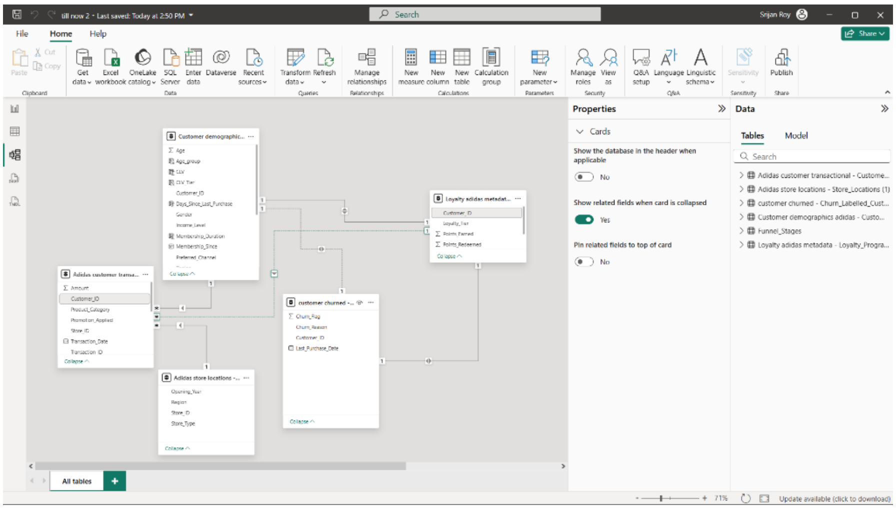
3. Give different tier-based customer more tier-based rewards and increasing frequency of rewards too.

Task-5

Steps followed-

- Checked the relationship between store data with transactions and made a many to one/ one to many relationships between both using store id as a key
- Visualised and computed Avg. Transaction Amount by store types
- Visualised churn rate by store type
- Created a measure named retention where retention is the opposite of measure or Retenton_Rate = 1-[Churn Rate]





TASK-6

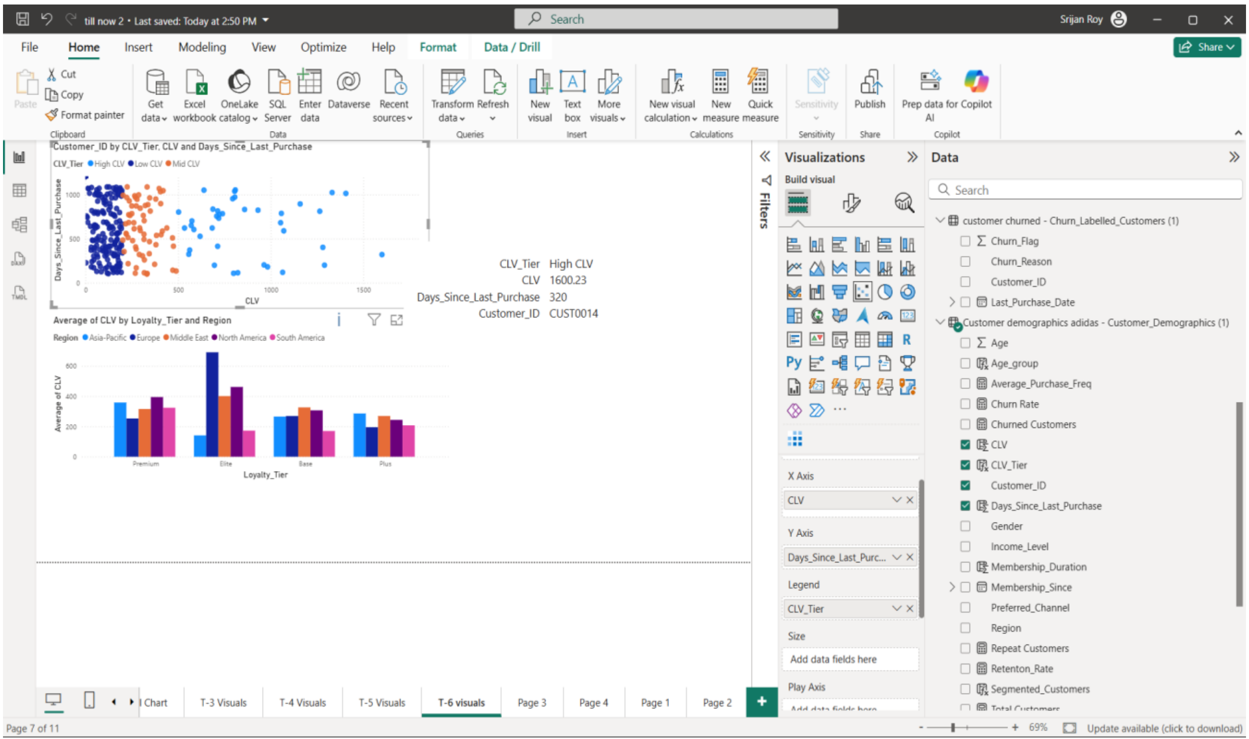
Steps followed-

- Created a Calculated column as CLV where CLV= Total amount spent/ Membership Duration
- Segmented customers (calculated column) into Low, Medium and High CLV and naming it as CLV tier (denoting [CLV]<200,"Low CLV", [CLV]<500,"Mid CLV" and [CLV]>500,"High CLV").
- Visualised CLV vs Days since last purchase into a scatter chart where x axis is CLV, y axis is Date_since_last_purchase and putting CLV_Tier into legends and Cusomer_id into tooltips which perfectly segments individual customers with their CLV_tier and how many days it's been from their last purchase.
- Visualised CLV by Loyalty Tier and Region using clustered column chart putting Loyalty_Tier in X axis and CLV(Average) in Y axis while putting region into legends which computes CLV by loyalty tier per region flawlessly.

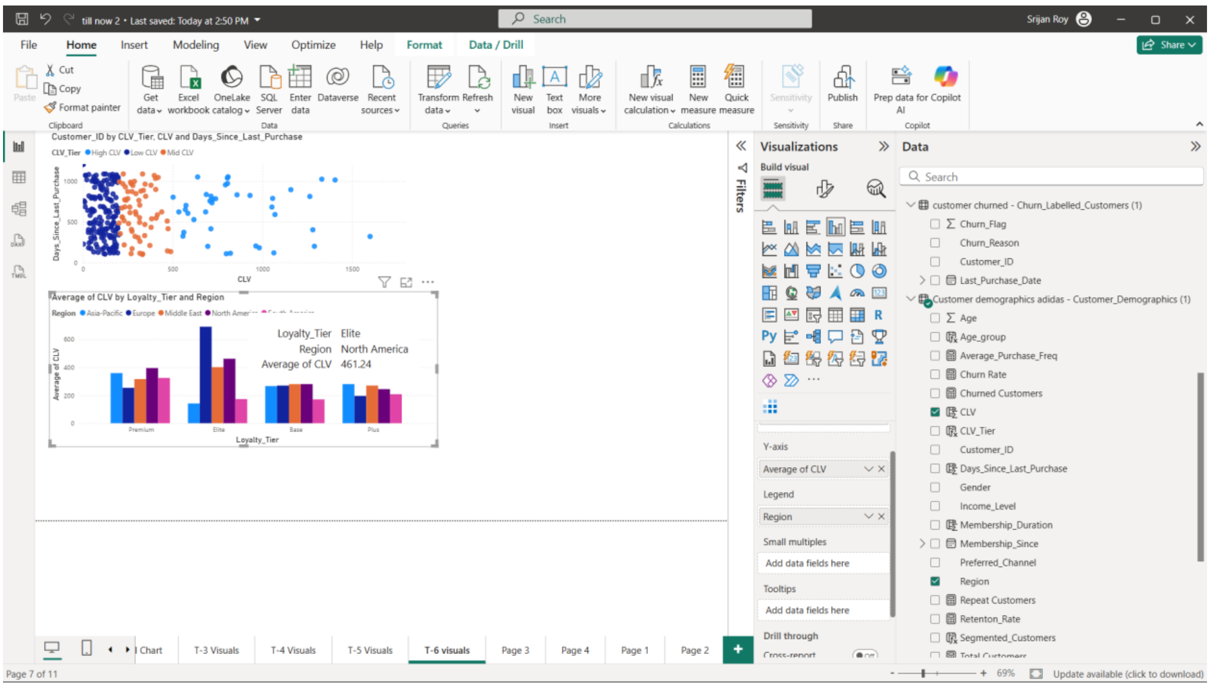
DAX Used-

1. `CLV = DIVIDE([Total_Amount_Spent],'Customer demographics adidas - Customer_Demographics (1)'[Membership_Duration])`
2. `CLV_Tier = SWITCH(TRUE(),'Customer demographics adidas - Customer_Demographics (1)'[CLV]<200,"Low CLV", 'Customer demographics adidas - Customer_Demographics (1)'[CLV]<500,"Mid CLV",'Customer demographics adidas - Customer_Demographics (1)'[CLV]>500,"High CLV")`

CLV vs Days since Last purchase



CLV by Loyalty Tier & Region



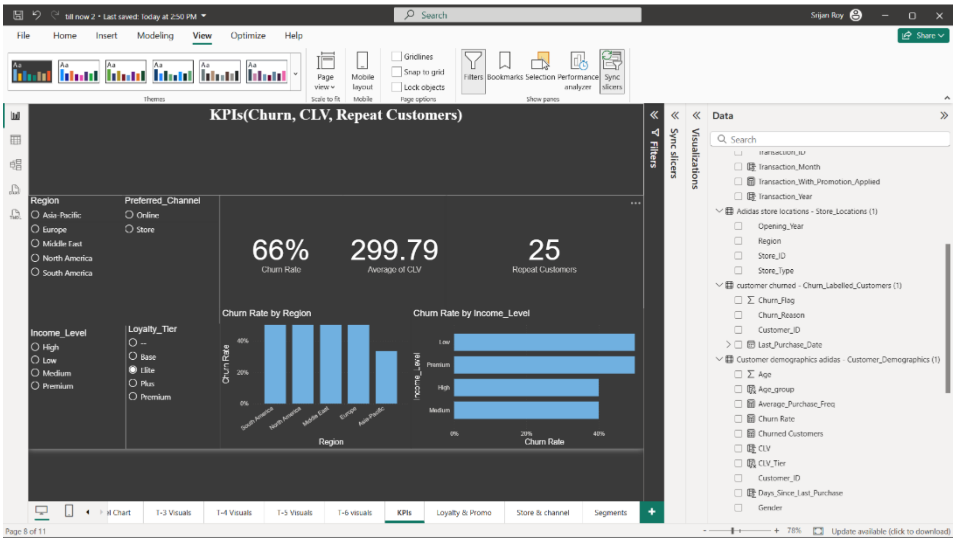
Task-7

Steps followed-

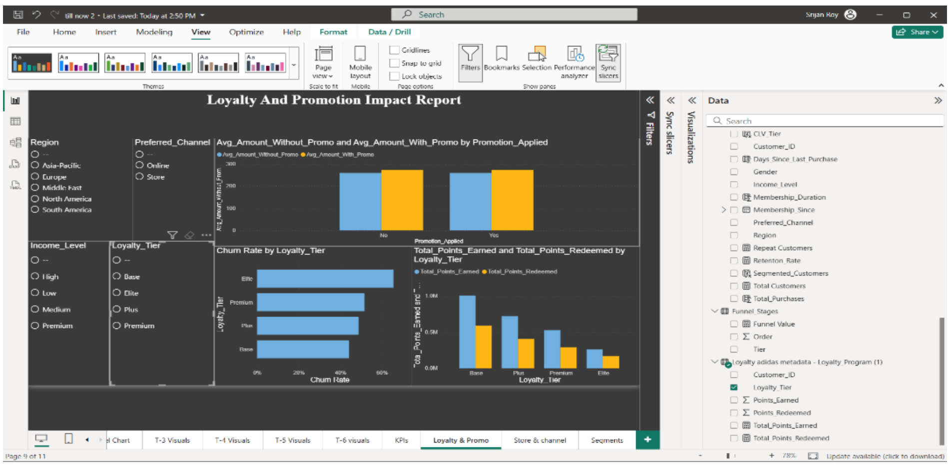
- Created a multi-Page Power Bi report where-
  1. Page 1 contains All KPIs (Churn rate, CLV, Repeat customers) with visuals
  2. Page 2 contains Loyalty and promo impact for the campaign
  3. Page 3 contains all the stores and channel insights like where do customers want to prefer shopping and whether they prefer online channel or offline ones
  4. Page 4 contains the segmentation part like CLV tier and how it effects the channel specific regions
- Added list slicers (Region, Channel, Income, Loyalty tier) are added and synced

Power Bi Report-

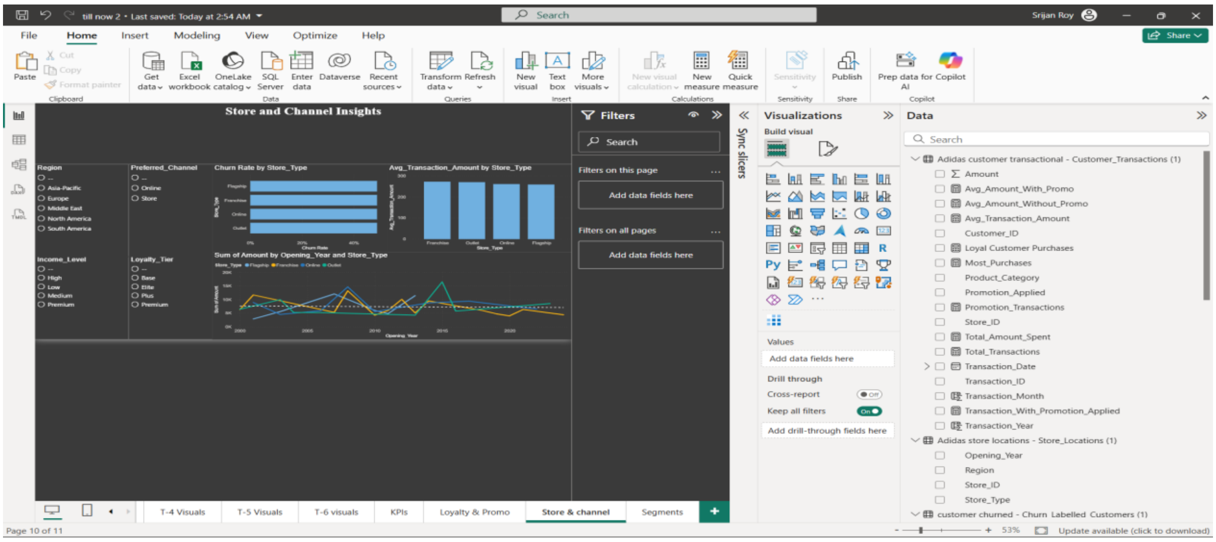
Page-1 KPIs



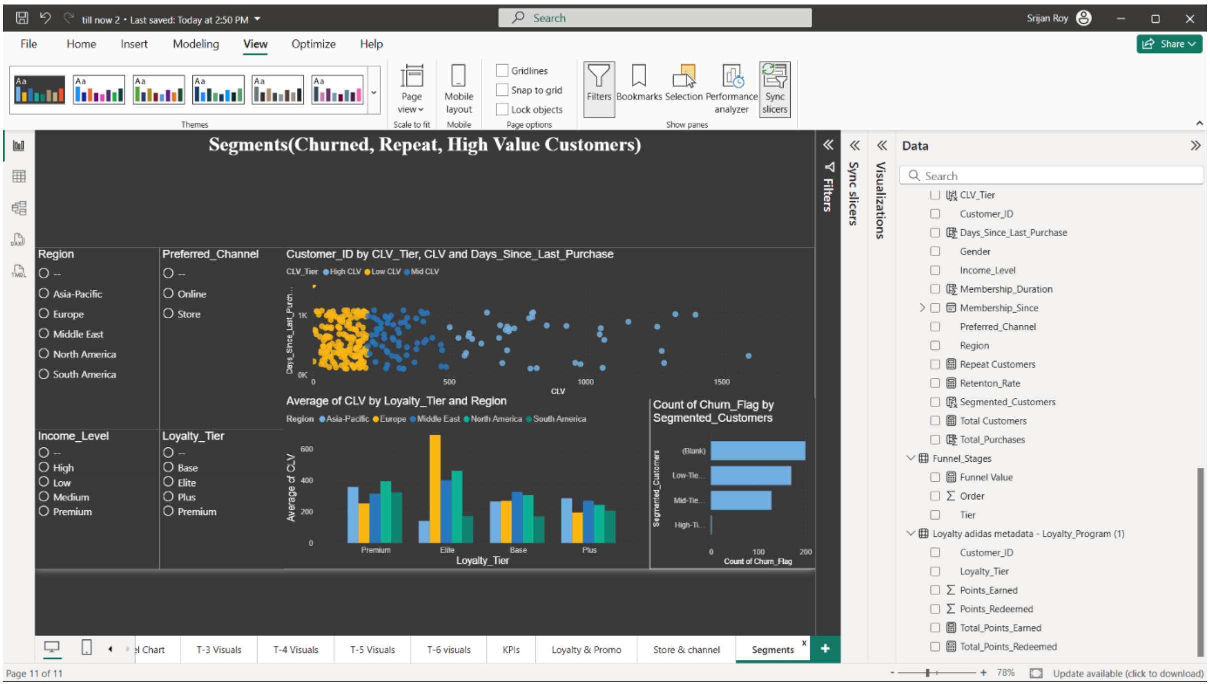
Page-2 Loyalty & Promotion Impact



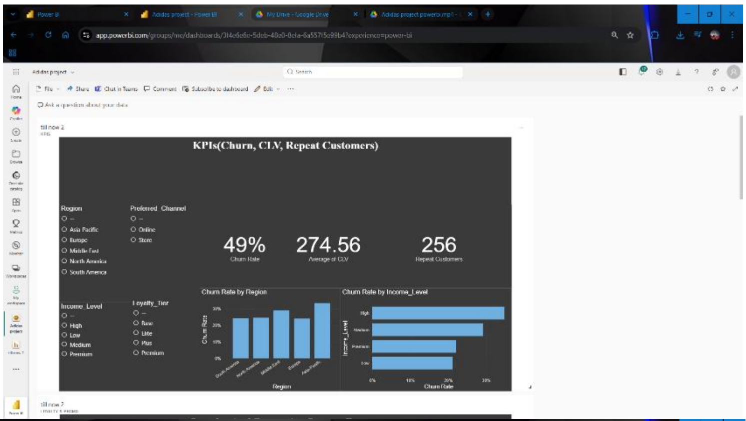
Page-3 Store/Channel Insights

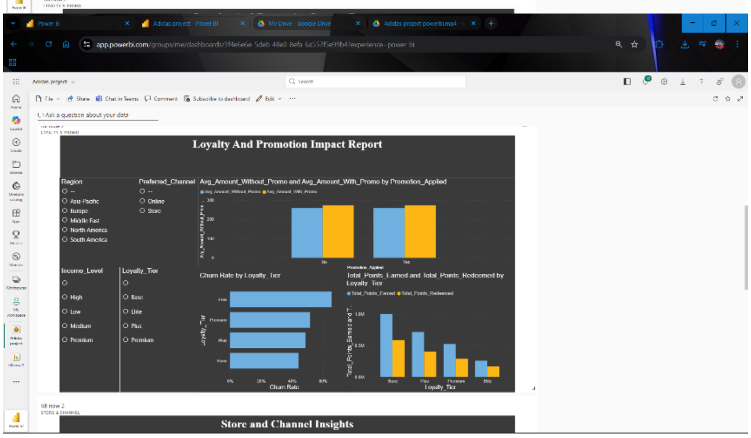


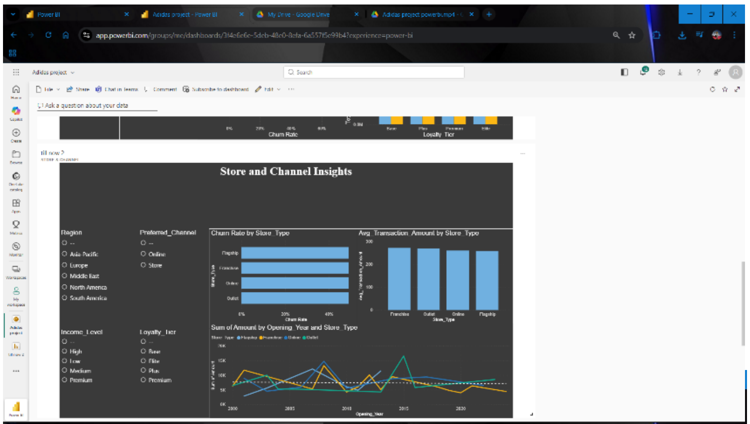
Page-4 Segmentations (Churned, Repeat, High value customers)

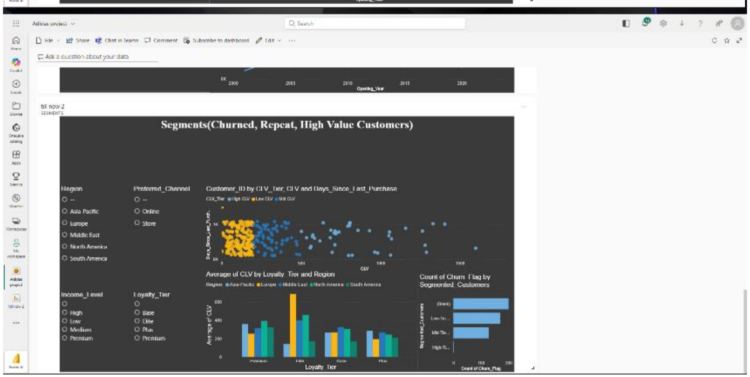


Dashboard in power-bi service









Recommendations –

1. I'd suggest High CLV customers, High-Tier Loyalty members like Plus and premium ones, High tier customers as well as Mid tier customers with frequent purchases, customers churning due to competitor, inactivity or low engagement to prioritize for retention.
2. Franchise stores show highest average transaction amount. Online customers have higher volume with lower retention. Flagship stores show weakest performance as more people tend to buy online or other channels.
3. To strengthen loyalty programme – Make points more noticeable and viable to users as most users usually have unused points left, Make redemption easier and more friendlier whether it's online app optimisation or human interactions, Creating more opportunities like Exclusive tier base reward systems.

Task-8

Vid explanation link - https://drive.google.com/file/d/1swrSr8m-xC6BPdvQNG0nq1xjK-w275KF/view?usp=sharing