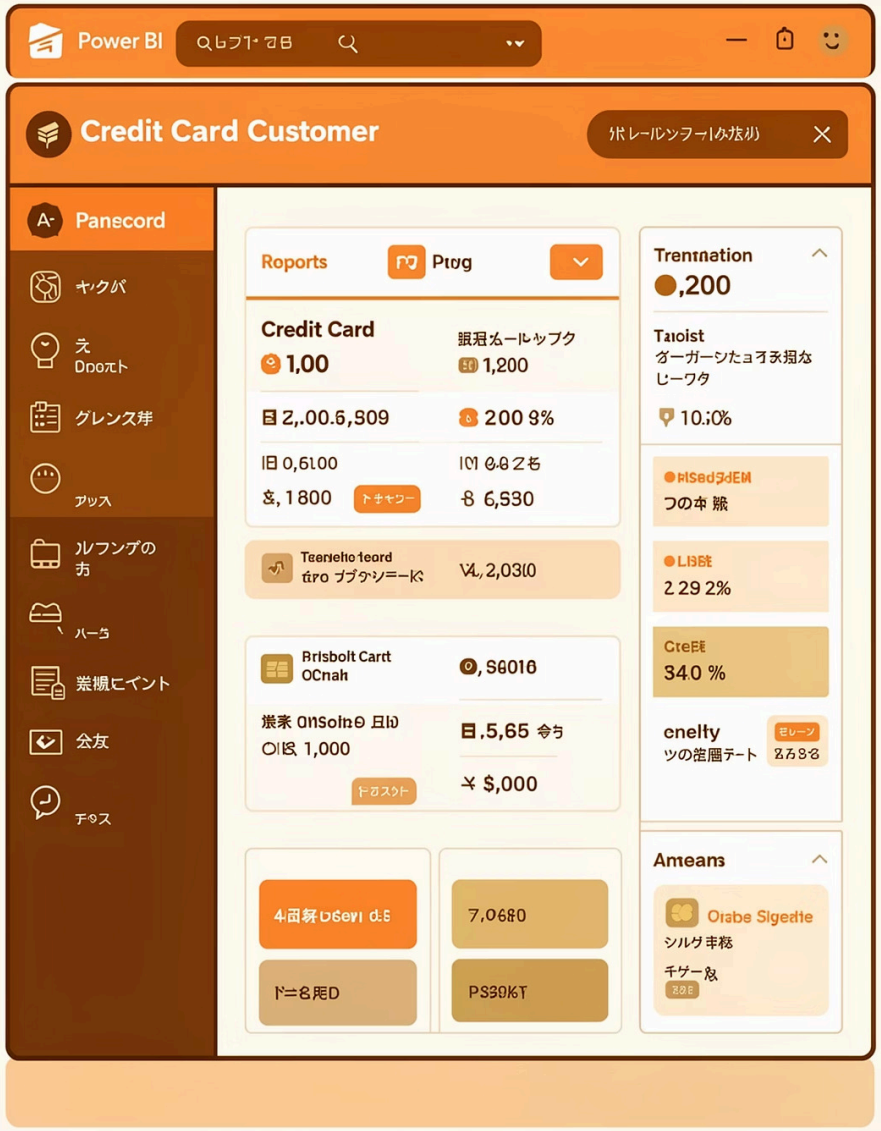


Unlocking Credit Card Insights with Power BI

This documentation outlines the creation of two interactive Power BI dashboards: a Credit Card Customer Report and a Credit Card Transaction Report. These dashboards offer deep dives into customer demographics, spending patterns, and revenue performance, empowering data-driven decisions.

Project Overview & Key Tools

This project delivers two robust Power BI dashboards designed to provide actionable intelligence from credit card data. By leveraging advanced analytics, we gain clarity on who our customers are and how they transact.

Tools Utilized

Power BI Desktop

For interactive dashboard design

DAX

For powerful data calculations

CSV Datasets

Source for customer & Credit Card

Customer Report

Demographics & Spending Behavior

Transaction Report

Revenue & Performance Analysis

DASHBOARD 1

Credit Card Customer Report: Data Preparation

Getting Started with Data

The first step involves importing the necessary datasets and establishing the foundation for data analysis.

01

Load Data

Import `customer.csv` and `CreditCard.csv` into Power BI Desktop.

02

Create Relationship

Establish a one-to-many relationship: `customer[Client_Num]` → `CreditCard[Client_Num]`.

DASHBOARD 1

Enhancing Data with DAX Calculations

DAX (Data Analysis Expressions) is crucial for transforming raw data into meaningful insights. Here's how we enrich the customer dataset:

Age Group Column

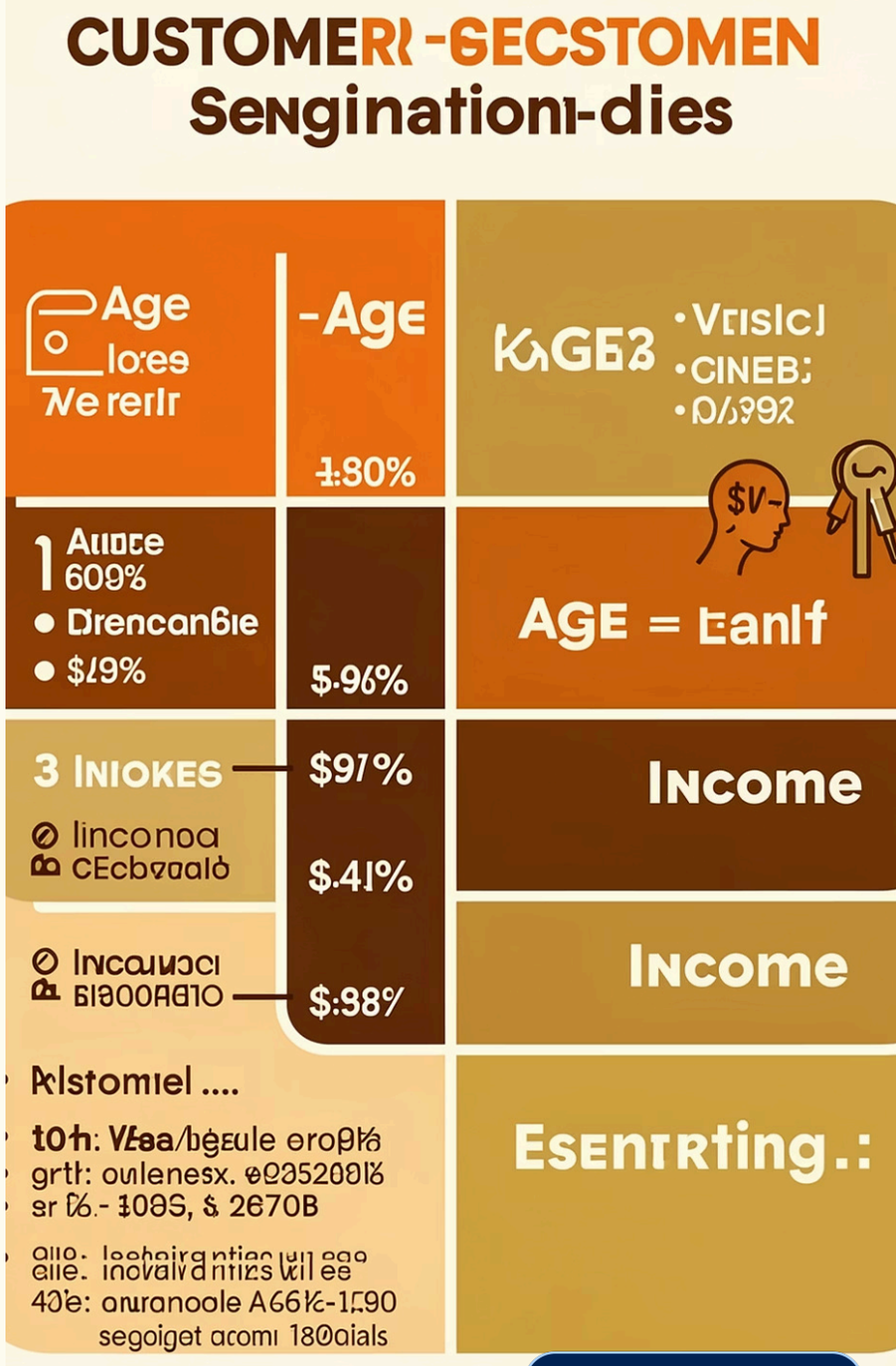
Categorize customers into distinct age brackets.

Income Group Column

Classify customers by income tiers (Low, Medium, High).

Key Measures

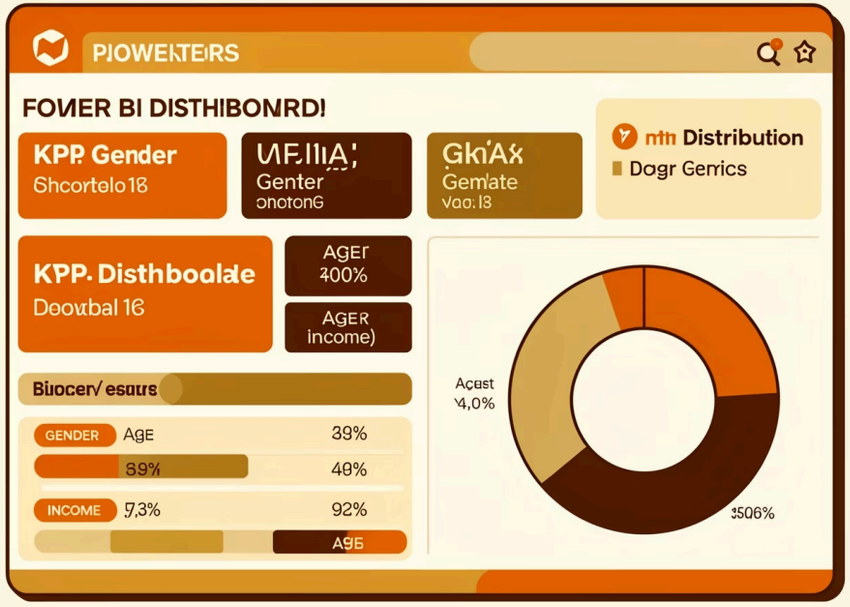
- Total Customers
- Avg Income
- Avg Customer Age
- Customer Satisfaction Score



DASHBOARD 1

Building the Customer Report Visuals

Interactive visuals bring the data to life, allowing users to explore customer segments and behaviors dynamically.



KPI Cards

Prominently display key metrics at the top.

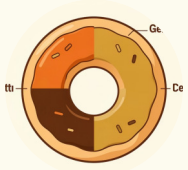
Slicers

Enable filtering by Gender, Age Group, and Income Group.

DASHBOARD 1

Deep Dive: Customer Segmentation Visuals

These visuals offer a comprehensive view of our customer base, helping to identify key segments and their characteristics.

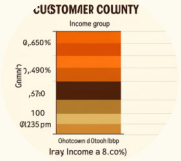


Gender Distribution

A donut chart to visualize the proportion of male vs. female customers.

Customers by Age Group

A bar chart illustrating customer distribution across different age brackets.



Customers by Income Group

A column chart highlighting customer segments based on income levels.

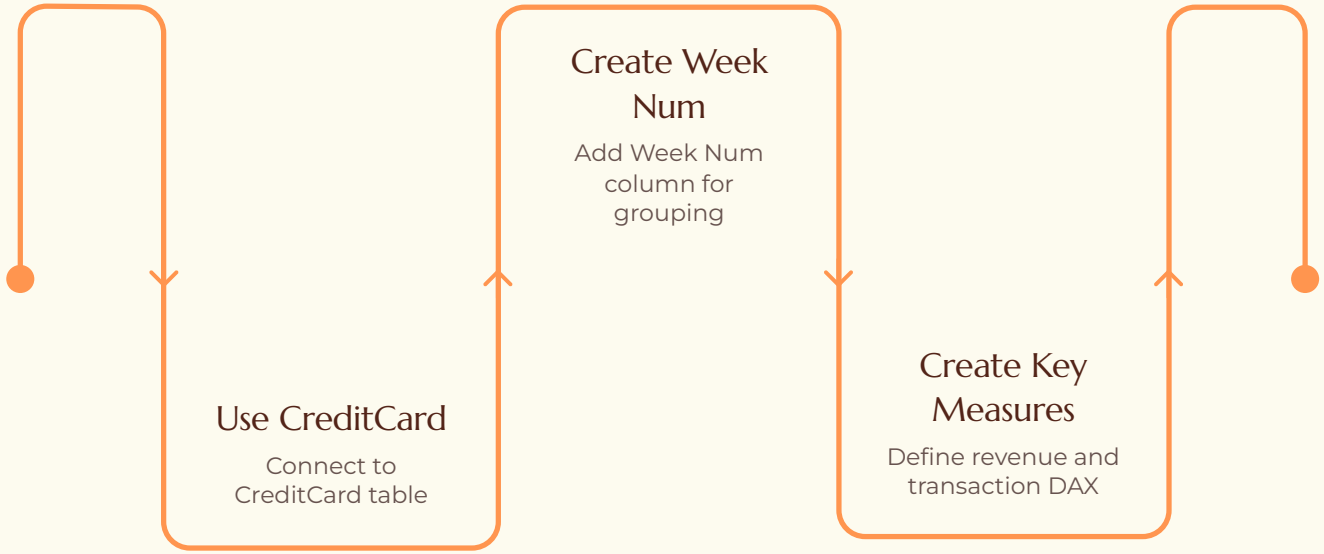
Customer Detail Table

A detailed table for Job, Income, and Satisfaction Score.

DASHBOARD 2

Credit Card Transaction Report: Setup

The transaction report focuses on understanding spending patterns and revenue performance.



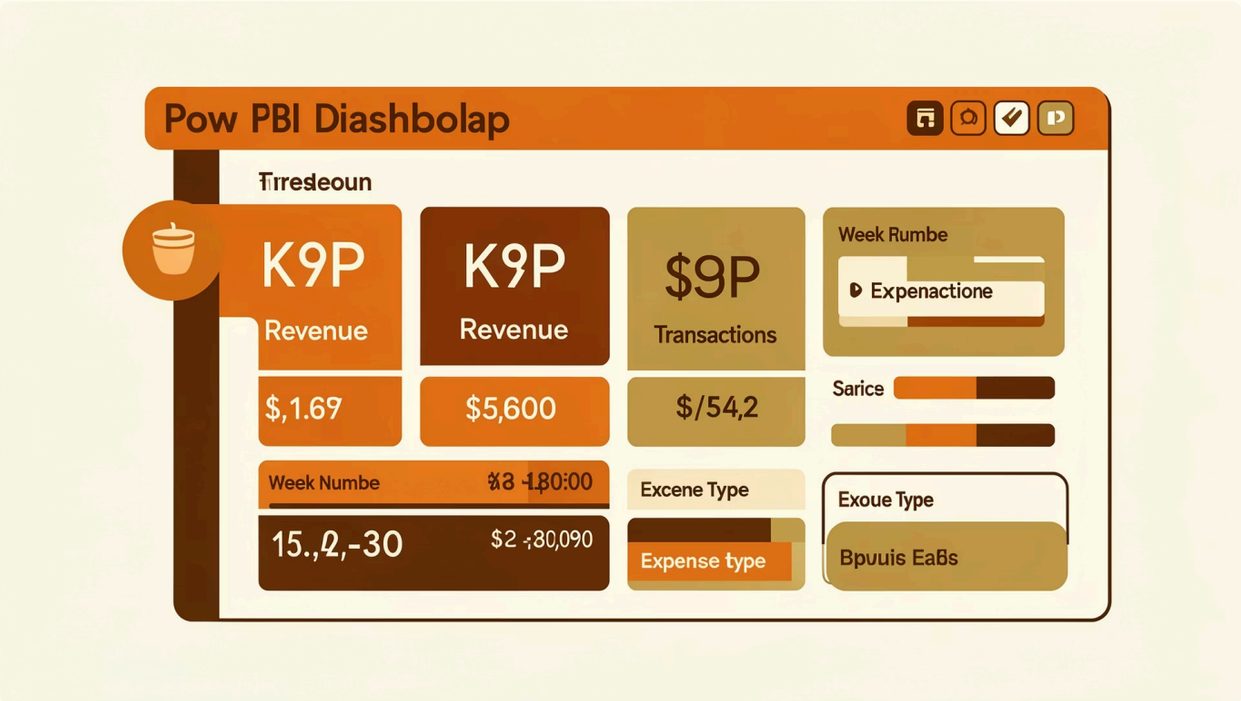
Core Measures

- Total Revenue
- Total Transactions
- Current Week Revenue
- Previous Week Revenue

These DAX measures provide real-time insights into financial performance.

DASHBOARD 2

Transaction Report Visuals: Revenue & Spending



Interactive slicers and intuitive KPIs allow for quick analysis of transaction data.

These elements ensure a user-friendly experience and efficient data exploration.

KPI Cards

Display revenue and transaction metrics.

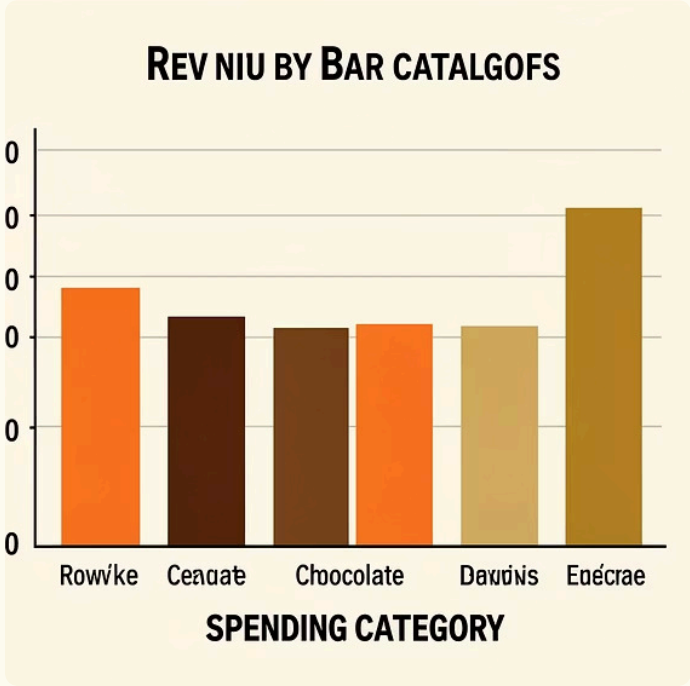
Slicers

Filter by Week Number and Expense Type.

DASHBOARD 2

Visualizing Transaction Trends & Modes

Understanding how revenue is generated and transactions are processed is key to optimizing operations.



Revenue by Spending Category

Identifies top revenue-generating categories.

Transaction Mode Distribution

Illustrates how customers prefer to transact.

Weekly Revenue Trend

Tracks revenue performance over time to identify peaks and dips.

Key Insights & Conclusion

Actionable Takeaways

- Medium income customers are our largest segment.
- Male customers contribute a higher share of total customers.
- Bills and Entertainment are top revenue categories.
- Swipe transactions dominate modes.
- Consistent weekly revenue with periodic peaks.

This Power BI project showcases strong skills in data modeling, DAX, dashboard design, and business insight generation, making it ideal for reporting and presentations.