Stacked Column Chart: Total Card Limit by Card Brand and Card Type

Visual Setup:

- **Chart Type**: Stacked Column
- **X-Axis**: `card_brand`
- **Y-Axis**: `SUM(card_limit)`
- **Legend**: `card_type`
- **Tooltip**: `client_id` → use `DISTINCTCOUNT(client_id)`

Drill Down: Monthly Trends in Card Issues

Create Hierarchy:

1. In the **Date** table:
   - Drag `Year` above `Month` to create a hierarchy
2. Use `account_opened_date` in `Card_data` for date context

Visual Setup:

- **Chart Type**: Stacked Column
- **Axis**: Date Hierarchy (Year → Month)
- **Values**: `COUNT(card_number)`
- Enable **drill down** (arrow icons above the chart)

Top 10 Clients by Total Card Limit

Bar Chart:

- **Axis**: `client_id`
- **Values**: `SUM(card_limit)`
- Filter:
  - **Top N** → Top 10 by total card limit
- Sort: **Descending**

Client Drill-through Page

1. Create new page → Rename: **Client Details**
2. Add **Card Table Visual** with:
   - `card_type`, `card_brand`, `card_limit`, etc.
3. Add **Drill-through filter**:
   - Drop `client_id` into **Drill-through Fields**
   - Add slicers: `card_type`, `expire_date` (year format)

To drill through: Right-click on a client in any chart → **Drill through > Client Details**

Heatmap Matrix: Expiry Trends

Visual: Matrix

- **Rows**: `card_brand`
- **Columns**: `YEAR(expire_date)`
- **Values**: `COUNT(card_number)`

Apply **Conditional Formatting**:

- Format by color scale (e.g., red → high expiries, green → low)

Dynamic Top N Slicer for Card Brands by Card Limit

Create What-If Parameter:

- **Modeling > New Parameter**
- Name: `TopNCount`, Range: 1 to 20 (step 1)

Create Measure:

```
Top N Card Brands =
VAR TopNTable =
    TOPN(
        SELECTEDVALUE(TopNCount[TopNCount]),
        SUMMARIZE(Card_data, Card_data[card_brand], "TotalLimit",
SUM(Card_data[card_limit])),
        [TotalLimit],
        DESC
    )
RETURN
    IF(
        MAX(Card_data[card_brand]) IN SELECTCOLUMNS(TopNTable, "card_brand"),
        SUM(Card_data[card_limit])
    )
```

Visual:

- Use **Column Chart**
- **X-Axis**: `card_brand`
- **Y-Axis**: `Top N Card Brands` measure
- Add slicer from `TopNCount[TopNCount]`

Sales.csv: Average Days Between Sales Per Customer

Prerequisites:

- Load `sales.csv`
- Disable Auto DateTime
- Create a **Date Table** as done earlier

Create Measure:

```
Avg Days Between Sales =
AVERAGEX (
```

```
    VALUES (Sales[customer_id]),
    VAR Dates =
        CALCULATETABLE (
            VALUES (Sales[sales_date]),
            FILTER (Sales, Sales[customer_id] = EARLIER(Sales[customer_id]))
        )
    VAR SortedDates =
        ADDCOLUMNS (
            Dates,
            "PrevDate", CALCULATE (MAX (Sales[sales_date]), FILTER (Sales,
Sales[customer_id] = EARLIER(Sales[customer_id]) && Sales[sales_date] <
EARLIER(Sales[sales_date])))
        )
    VAR Diffs =
        ADDCOLUMNS (SortedDates, "DiffDays", DATEDIFF ([PrevDate],
Sales[sales_date], DAY))
    RETURN AVERAGEX (FILTER (Diffs, NOT ISBLANK([PrevDate])), [DiffDays])
)
```