

End-to-End Sales Funnel, Customer Retention & Pipeline Forecast Analytics Dashboard (Power BI)

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Tool: Microsoft Power BI

Domain: Sales Analytics / CRM Analytics / Business Intelligence

1. Executive Summary

This project is an enterprise-level, end-to-end Sales & Pipeline Analytics dashboard built using Power BI. It is designed to simulate a real-world CRM analytics system similar to Salesforce and HubSpot reporting environments. The solution integrates data modeling, DAX-based KPI calculations, interactive navigation, drillthrough analysis, forecasting logic, and executive storytelling to support data-driven decision-making across the sales lifecycle.

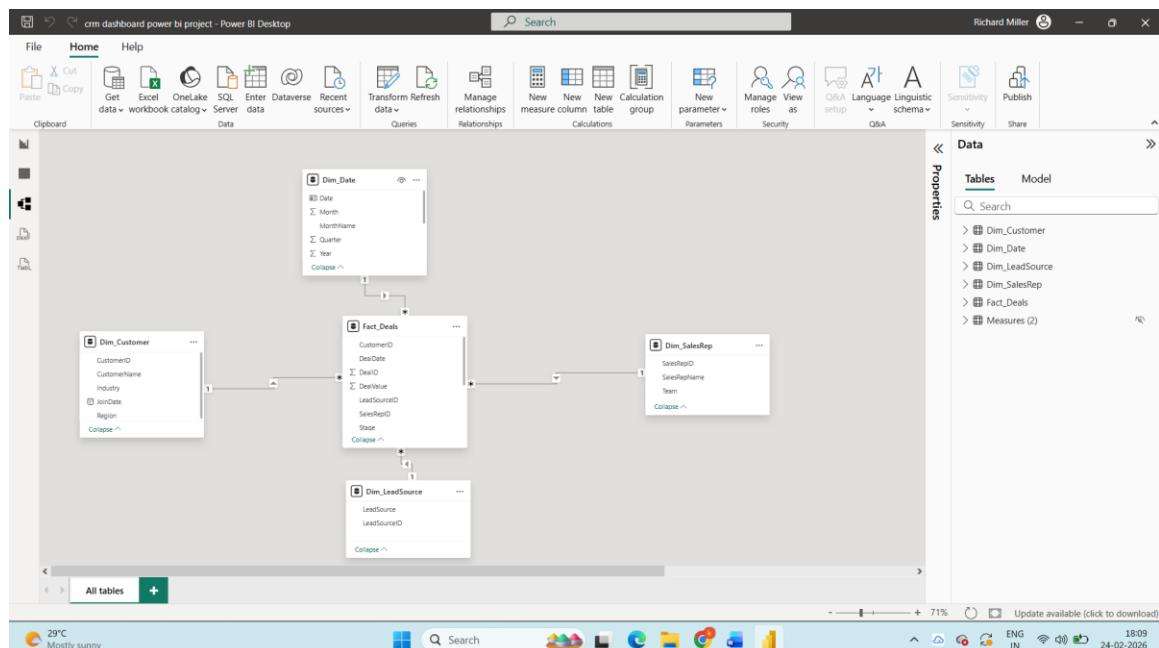
The dashboard demonstrates strong alignment between business domain knowledge (10+ years in sales) and analytics skills, making it highly relevant for Data Analyst, Business Analyst, and Sales Analyst roles.

2. Why This Project is Shortlist-Worthy (Recruiter Perspective)

- Built a 6+ page BI application instead of a single generic dashboard
- Implemented Star Schema data modeling (industry best practice)
- Created advanced DAX measures for retention, forecasting, and dynamic insights
- Designed executive-level UX with navigation, slicers, and drillthrough
- Included business storytelling (Executive Insights, Funnel Diagnostics, Pipeline Forecasting)
- Demonstrated domain-driven analytics (Sales Funnel, Customer Retention, Pipeline Value)

3. Data Model & Architecture

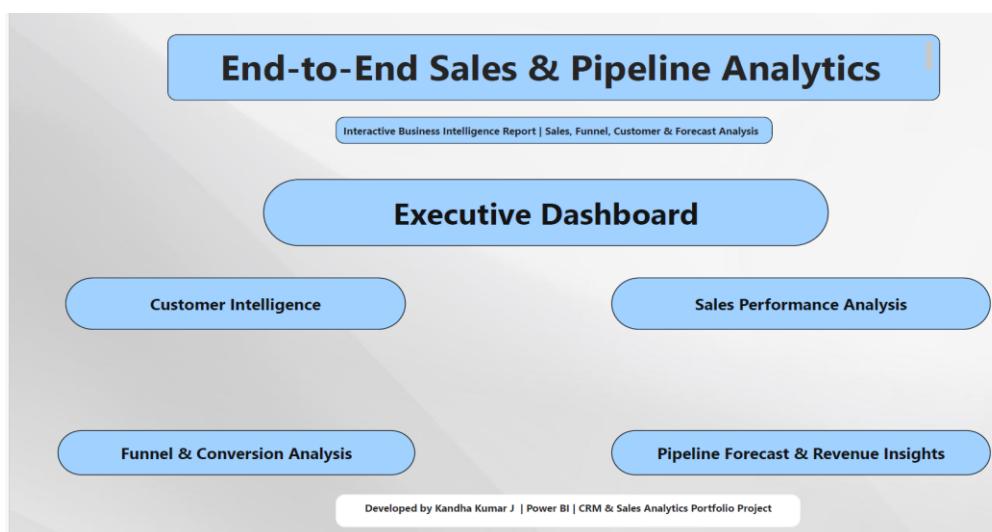
The dashboard is built using a Star Schema model consisting of a central Fact_Deals table connected to dimension tables such as Dim_Date, Dim_Customer, Dim_SalesRep, and Dim_LeadSource. This architecture improves performance, scalability, and analytical flexibility while following Power BI and PL-300 best practices.



4. Dashboard Page-Wise Explanation

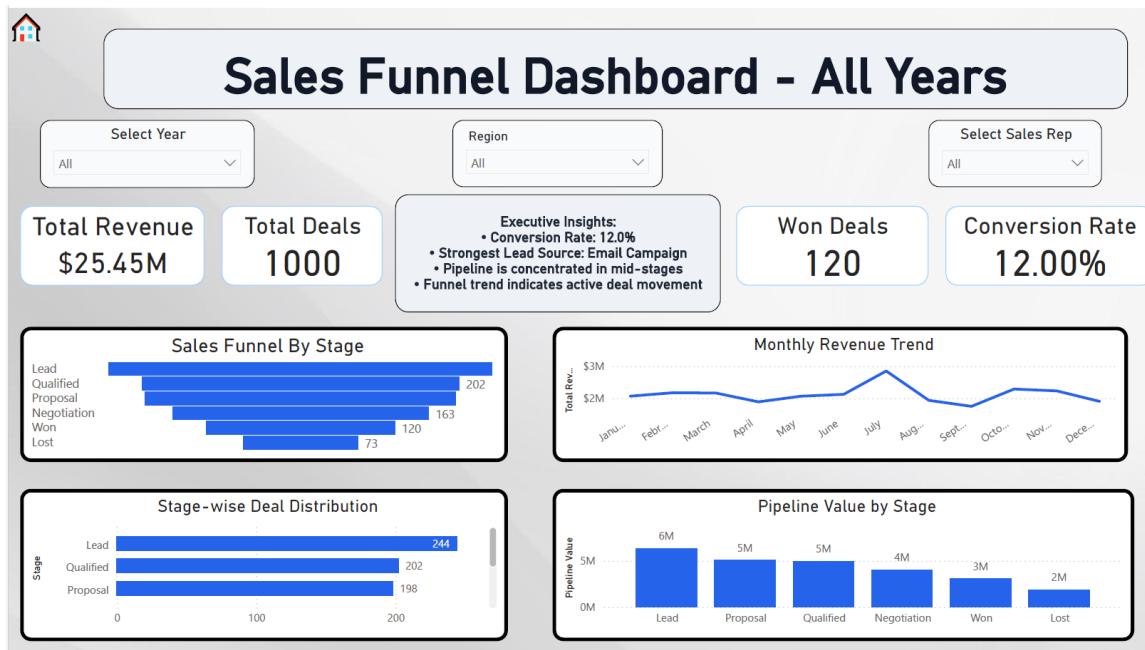
4.1 Home / Navigation Page

Acts as a BI application landing page with navigation buttons to different analytical modules. This improves user experience and mimics real enterprise dashboards.



4.2 Executive Overview

Displays high-level KPIs such as Total Revenue, Total Deals, Won Deals, and Conversion Rate along with funnel visuals, revenue trends, and executive insights for strategic decision-making. Interactive With Slicers, User Interactive Title and Executive Insights KPI Card



4.3 Customer Intelligence

Focuses on retention analytics including Unique Customers, Returning Customers, Repeat Customer %, and Customer Growth trends to evaluate customer loyalty and acquisition performance.



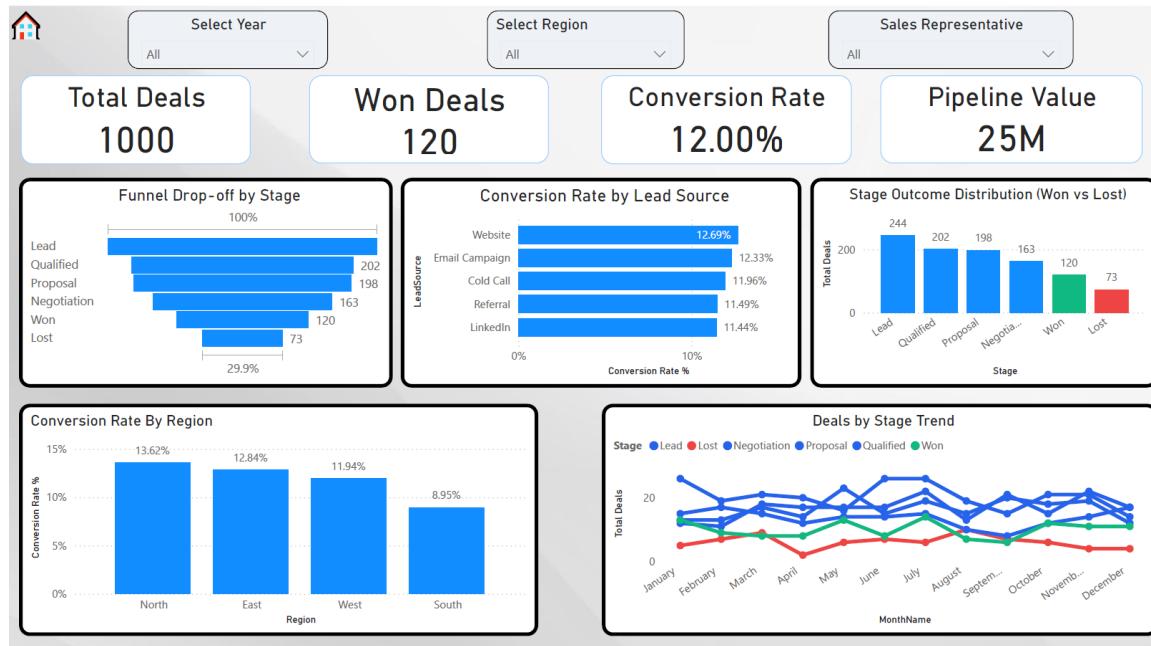
4.4 Sales Performance Analysis

Analyzes performance across Sales Representatives, Regions, Lead Sources, and Top Customers to identify revenue drivers and top-performing segments.



4.5 Funnel & Conversion Analysis

Provides diagnostic insights into deal progression, conversion efficiency, stage drop-offs, and win/loss distribution across the sales funnel.



4.6 Pipeline & Forecast Insights

Includes Open Pipeline Value and Weighted Pipeline forecasting using stage probability logic to support revenue planning and pipeline health monitoring.



4.7 Drillthrough Detail Page

Enables deep-dive analysis at deal level including Customer, Deal Value, Stage, Region, Lead Source, and Sales Representative for root-cause investigation.

The screenshot shows a Power BI report interface. At the top, there are four summary cards: 'Drill through 1000' (with a house icon), 'Total Deal Value 9M', 'Total Deals 335', and 'Average Deal Size \$25.54K'. Below these is a section titled 'Detail Deal Breakdown' containing a table with the following data:

CustomerName	Sum of DealValue	Stage	SalesRepName	LeadSource	DealDate	Region
Customer_10	23490	Lead	Emma	Email Campaign	Tuesday, December 03, 2024	West
Customer_10	31341	Proposal	Frank	LinkedIn	Tuesday, November 07, 2023	West
Customer_10	4158	Qualified	Charlie	Cold Call	Monday, October 21, 2024	West
Customer_10	19557	Won	Bob	Referral	Thursday, November 21, 2024	West
Customer_10	2001	Won	Bob	Website	Monday, October 30, 2023	West
Customer_102	9750	Lost	Alice	Cold Call	Tuesday, July 30, 2024	West
Customer_102	34040	Proposal	Emma	Cold Call	Thursday, July 18, 2024	West
Customer_102	32601	Qualified	David	Cold Call	Thursday, January 04, 2024	West
Customer_105	48204	Lead	Frank	Cold Call	Sunday, March 31, 2024	West
Customer_105	33651	Proposal	Alice	Email Campaign	Thursday, July 13, 2023	West
Customer_105	18297	Won	Bob	Email Campaign	Wednesday, December 06, 2023	West
Customer_105	9947	Won	Bob	Website	Friday, July 28, 2023	West
Customer_107	38038	Lead	Alice	Email Campaign	Sunday, June 02, 2024	West
Customer_107	5616	Lead	Frank	LinkedIn	Friday, June 30, 2023	West
Customer_107	35457	Negotiation	Alice	LinkedIn	Friday, February 16, 2024	West
Customer_107	44066	Qualified	Frank	Website	Wednesday, October 23, 2024	West
Customer_111	18197	Lead	Bob	Email Campaign	Thursday, January 26, 2023	West
Customer_111	16327	Lead	Frank	Website	Tuesday, July 18, 2023	West
Customer_111	24849	Proposal	Bob	Email Campaign	Wednesday, November 22, 2023	West
Customer_111	18857	Proposal	Charlie	Email Campaign	Thursday, November 09, 2023	West
Total	8556924					

5. Complete DAX Measures Documentation (100% PBIX Accurate)

Core KPI Measures

Total Revenue

DAX: `SUM(Fact_Deals[DealValue])`

Calculates total revenue generated from all deals and serves as the primary financial KPI.

Total Deals

DAX: `COUNT(Fact_Deals[DealID])`

Counts the total number of deals in the pipeline and closed stages.

Won Deals

DAX: `CALCULATE([Total Deals], Fact_Deals[Stage] = "Won")`

Measures successful deal closures and sales effectiveness.

Lost Deals

DAX: CALCULATE([Total Deals], Fact_Deals[Stage] = "Lost")

Tracks failed opportunities for funnel loss analysis.

Conversion Rate %

DAX: DIVIDE([Won Deals], [Total Deals], 0)

Calculates the efficiency of the sales funnel by measuring win ratio.

Customer Intelligence Measures (Advanced)

Unique Customers

DAX: DISTINCTCOUNT(Fact_Deals[CustomerID])

Counts distinct customers to measure customer base size.

Avg Deal Size

DAX: DIVIDE([Total Revenue], [Total Deals], 0)

Evaluates revenue efficiency per deal and sales quality.

Returning Customers

DAX: Returning Customers =

```
CALCULATE (
    DISTINCTCOUNT(Fact_Deals[CustomerID]),
    FILTER (
        VALUES(Fact_Deals[CustomerID]),
        CALCULATE(COUNT(Fact_Deals[DealID])) > 1
    )
)
```

Identifies customers with more than one deal using FILTER and CALCULATE logic. Used for retention analysis.

Repeat Customer %

DAX: DIVIDE([Returning Customers], [Unique Customers], 0)

Measures customer retention performance and loyalty.

New Customers

DAX: [Unique Customers] - [Returning Customers]

Calculates newly acquired customers for growth analysis.

Forecast & Pipeline Measures (High Value)

Open Pipeline Value

```
DAX: Open Pipeline Value =  
CALCULATE(  
SUM(Fact_Deals[DealValue]),  
KEEPFILTERS(  
NOT(Fact_Deals[Stage] IN {"Won", "Lost"})  
)  
)
```

Uses CALCULATE with KEEPFILTERS to exclude Won and Lost stages. Represents active revenue potential in the pipeline.

Weighted Pipeline

```
Weighted Pipeline =  
SUMX(  
Fact_Deals,  
Fact_Deals[DealValue] *  
SWITCH(  
    Fact_Deals[Stage],  
    "Lead", 0.1,  
    "Qualified", 0.3,  
    "Proposal", 0.6,  
    "Negotiation", 0.8,  
    0  
)  
)
```

DAX: SUMX with stage probability weighting (Lead 0.1, Qualified 0.3, Proposal 0.6, Negotiation 0.8). Provides realistic revenue forecasting based on deal stages.

UX / Advanced BI Features

Dynamic Title

DAX: "Sales Funnel Dashboard - " & SELECTEDVALUE(Dim_Date[Year], "All Years")
Explanation: Creates a context-aware dynamic title that changes based on the selected year slicer. Enhances executive usability and storytelling.

Executive Insights

```
DAX: Executive Insights =
VAR ConvRate = FORMAT([Conversion Rate %], "0.0%")
VAR TopSource =
TOPN(
1,
VALUES(Dim_LeadSource[LeadSource]),
[Total Revenue],
DESC
)
VAR SourceName =
CONCATENATEX(TopSource, Dim_LeadSource[LeadSource], ", ")
RETURN
"Executive Insights:" & UNICHAR(10) &
"• Conversion Rate: " & ConvRate & UNICHAR(10) &
"• Strongest Lead Source: " & SourceName & UNICHAR(10) &
"• Pipeline is concentrated in mid-stages" & UNICHAR(10) &
"• Funnel trend indicates active deal movement"
```

Uses VAR, TOPN, CONCATENATEX, and FORMAT to generate dynamic business insights including conversion rate and top-performing lead source. This simulates real executive reporting.

6. Business Impact & Key Insights

- Identified funnel drop-offs between negotiation and closing stages
- Measured customer retention using repeat customer analytics
- Forecasted realistic revenue using weighted pipeline logic
- Enabled executive decision-making through KPI storytelling
- Delivered a full CRM analytics suite instead of a single dashboard

7. Conclusion (Portfolio & Career Impact)

This project demonstrates advanced Power BI capabilities including data modeling, DAX optimization, interactive UX design, and business storytelling. The implementation of dynamic insights, forecasting metrics, drillthrough analytics, and multi-page architecture makes this project equivalent to a real enterprise BI solution. This level of depth, domain alignment, and technical execution is a strong reason for candidate shortlisting in Data Analyst, Business Analyst, and Sales Analytics roles.

8. Role Relevance & Business Value

This project is designed to align with multiple analytics roles including Data Analyst, Business Analyst, and Power BI Developer.

- For Data Analyst roles: The dashboard focuses on KPI tracking, trend analysis, conversion metrics, and customer behavior insights using advanced DAX measures.
- For Business Analyst roles: The report emphasizes business storytelling, executive insights, sales funnel diagnostics, and decision-support metrics.
- For Power BI Developer roles: The project demonstrates data modeling using a star schema, advanced DAX calculations, drillthrough functionality, page navigation, and multi-page enterprise dashboard design.

By combining data modeling, analytical storytelling, and interactive visualization, this solution simulates a real-world business intelligence application used in CRM and sales analytics environments.