Internship report

A Financial Health Dashboard for SMEs

Organization : CodeAlpha

Intern : Nisha

Course subject : Power BI

Duration:

10July-10August2025

# 1. Project Objective

The goal of this dashboard is to provide SMEs with a clear, interactive view of their financial health using Power BI. It simplifies complex financial data—like income, expenses, profit, and budgets—into visual insights that support better decision-making.

It helps solve key problems such as the lack of real-time financial visibility, difficulty in tracking performance vs budget, and limited forecasting ability.

# 2. Business Problem

Small and Medium Enterprises (SMEs) often operate without advanced financial tools, making it difficult to maintain clarity and control over their finances. They struggle with:

* Fragmented and manual tracking of revenues and expenses
* Limited visibility into real-time financial performance
* Inadequate budget vs actual comparisons
* Lack of forecasting to support forward-looking decisions

# 3. Dataset Description

The dataset used in this project contains key financial indicators relevant to SME operations, structured for time-based analysis. It includes:

* **Revenue** – Income generated from sales and services
* **COGS (Cost of Goods Sold)** – Direct costs tied to product or service delivery
* **Operating Expenses** – Fixed and variable costs such as salaries, rent, utilities
* **Budgeted Revenue** – Planned income for each month, used for comparison
* **Actual Revenue** – Real recorded income by period
* **Net Profit** – Calculated from Revenue – (COGS + Expenses)
* **Date** – Monthly timeline enabling trend, forecasting, and variance analysis
* – Measures like Gross Profit, Variance, and Profit Margins created using DAX

# 4. Dashboard Features

#### 🟦 ****1. KPI Cards****

* Present key metrics such as Revenue, Gross Profit, Net Profit, Gross Profit Margin, and Net Profit Margin
* Positioned at the top of the dashboard for immediate visibility
* Designed for clarity and quick status checks

📈 **2. Trend Analysis (Line Charts)**

* Line charts visualize month-over-month trends in revenue and profit
* Includes a built-in **forecast line** to project future revenue
* Helps users assess financial trajectory and seasonal patterns

#### 📅 ****3. Slicer (Date Filter)****

* Allows users to filter the entire dashboard by selected months
* Enhances user interactivity without affecting the dashboard structure

#### 📋 ****4. Budget vs Actual Table****

* Tabular visual comparing actual revenue to budgeted revenue
* Includes calculated fields for **Variance** and **Variance %**
* No conditional formatting applied to keep layout clean

#### 🧠 ****5. Insights & Summary Page****

* Final page of the dashboard highlights key takeaways and actionable business recommendations
* Professional layout used to enhance presentation value

# 5. DAX Measures

|  |  |  |
| --- | --- | --- |
| **Measure Name** | **DAX Formula** | **Description/Purpose** |
| Gross Profit | Gross Profit = [Revenue] - [COGS] | Calculates total gross profit by subtracting direct costs from revenue |
| Net Profit | Net Profit = [Revenue] - [COGS] - [Expenses] | Determines the bottom-line profit after all operational expenses |
| Gross Profit Margin | Gross Profit Margin = DIVIDE([Gross Profit], [Revenue]) | Shows profitability percentage before operating expenses |
| Net Profit Margin | Net Profit Margin = DIVIDE([Net Profit], [Revenue]) | Indicates final profitability as a percentage of revenue |
| Variance | Variance = [Actual Revenue] - [Budgeted Revenue] | Measures difference between actual and budgeted revenue |
| Variance % | Variance % = DIVIDE([Variance], [Budgeted Revenue]) | Expresses variance as a percentage to analyze over/under performance |

# 6. Tools and Techniques Used

* **Power BI Desktop** – for building and publishing the dashboard
* **Power Query Editor** – for cleaning and transforming raw data
* **DAX** – to create calculated measures like Gross Profit, Net Profit, and Variance %
* **Data Modeling** – to define relationships and enable time-based analysis
* **Visualizations** – used KPI cards, line charts with forecasts, tables, and slicers
* **Layout Design** – clean structure with clear sections for analysis and summary

# 7. Final Deliverables

The following files were submitted as part of the completed project:

* **Project File**: Final interactive Power BI report
* **Source Data**: Excel file containing raw financial data
* **Summary Report**: Professionally written PDF report with insights and project overview
* **GitHub Repository**: Includes all project files with README.md for documentation

# 8. Outcome and Insights

#### 🔹 ****1. Revenue Outpaced Budget****

"Revenue exceeded the budgeted target by ***12% in Q2***, indicating strong sales performance and growth momentum."

✅ Insight Use: Confirms successful revenue strategy and highlights periods of strength.

#### 🔹 ****2. Net Profit Margin Improvement****

"Net Profit Margin showed a consistent upward trend, reflecting better cost control and improved operational efficiency."

✅ Insight Use: Signals financial health and smarter spending decisions.

#### 🔹 ****3. Forecast Supports Future Growth****

"Forecasting reveals a positive revenue trajectory for the upcoming quarter, supporting confident business planning."

✅ Insight Use: Enables SMEs to prepare budgets and investments with more accuracy.

9. Conclusion

This project strengthened my skills in transforming raw financial data into meaningful, visual insights using Power BI. I gained hands-on experience in:

* Data cleaning and modeling using Power Query
* Creating advanced DAX measures for financial analysis
* Designing interactive dashboards with forecasting, KPIs, and slicers
* Presenting business insights clearly for strategic decision-making