

# INTERNSHIP REPORT

A Financial Health Dashboard for SMEs

Organization : CodeAlpha

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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

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#### 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
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### 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
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### 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

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- **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
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## 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.

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### ◊ 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.

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### ◊ 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.

## 10. 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

