**YENEPOYA UNIVERSITY**

**PROFITABILITY DASHBOARD FOR SMALL BUSINESSES**

**PROJECT SYNOPSIS**

**MASTER OF BUSINESS ADMINISTRATION**

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**Introduction**

**In today’s fast-paced business environment, small business owners often struggle with monitoring their financial health in real-time due to limited access to affordable, easy-to-use tools. Financial decision-making becomes even more difficult when critical data is scattered across spreadsheets, receipts, and accounting apps. To stay competitive and profitable, small businesses need a clear understanding of their income, expenses, and overall profitability—presented in a way that is both intuitive and actionable.**

**This project aims to develop a Profitability Dashboard tailored specifically for small businesses. The dashboard will serve as a centralized platform that visualizes financial metrics such as revenue, costs, gross and net profit, profit margins, and performance trends over time. By simplifying complex financial data into interactive visualizations and charts, the dashboard empowers small business owners to make data-driven decisions, optimize their spending, and ultimately, boost profitability.**

**The tool will also offer features such as data filtering, downloadable reports, and secure access, making it a practical and scalable solution for freelancers, startups, and local businesses looking to improve their financial management without the need for advanced technical knowledge or expensive software**

**LITERATURE REVIEW**

**According to Evans (2022), the most important metrics for small businesses are Gross Profit Margin, Operating Profit Margin, and Return on Assets (ROA). These metrics allow small business owners to assess how efficiently they are managing costs and generating profits.  
Evans further highlights the significance of integrating customer-centric metrics such as Customer Acquisition Cost (CAC) and Lifetime Value (LTV) into profitability dashboards. Understanding these metrics helps small businesses optimize marketing and customer retention strategies, which directly impact long-term profitability. Additionally, integrating cash flow metrics into dashboards ensures that business owners have real-time visibility of their liquidity, which is critical for sustaining day-to-day operations.**

**Research by Thompson and Roberts (2019) explores the role of data visualization in improving the decision-making process in small businesses. The study finds that well-designed dashboards enable managers to understand complex data quickly, leading to more accurate and timely decisions. Visual elements such as charts, graphs, and trend lines help business owners identify patterns and anomalies that may not be immediately apparent from raw data.**

**Objective**

**To monitor key financial metrics such as revenue, expenses, profit margins, and cash flow in real-time.**

**To provide a clear and visual representation of profitability trends for quick and effective decision-making.**

**To identify cost leakages and underperforming areas that affect overall business profitability.**

**To simplify financial reporting for small business owners with limited accounting or technical knowledge.**

**Methodology**

**The development of the Profitability Dashboard for Small Businesses was carried out through the following structured methodology:**

**Problem Identification & Objective Definition**

**Identified the challenges small businesses face in tracking profitability and managing finances.**

**Defined the objectives of creating a dashboard to provide visual insights into key financial metrics.**

**Data Collection**

**Sourced financial and business datasets relevant to small business operations from Kaggle.**

**Selected datasets that include revenue, expenses, operating costs, and profit margin details.**

**Data Cleaning & Preprocessing**

**Used Python (Pandas & NumPy) for data cleaning: handling missing values, correcting data formats, and filtering relevant columns.**

**Performed exploratory data analysis (EDA) to understand the data structure and distribution.**

**Data Analysis**

**Conducted profitability analysis using Python to calculate key metrics such as Gross Profit, Net Profit, Profit Margin, and Cost Breakdown.**

**Identified trends and patterns in revenue and expenses.**

**Dashboard Design and Development**

**Used Microsoft Excel to design a preliminary dashboard using Pivot Tables, Charts, and Conditional Formatting.**

**Integrated analyzed data to visually represent KPIs like monthly revenue, profit margins, top-selling products/services, etc.**

**Visualization & Automation**

**Enhanced dashboard features using Python libraries such as Matplotlib, Seaborn, and Plotly for dynamic visualizations.**

**Automated data updates and reports using Python scripts to ensure real-time monitoring.**

**ExpectedOutcome  
A fully functional, user-friendly profitability dashboard that allows small business owners to easily monitor and analyze financial data.**

**Visual representation of key financial indicators such as revenue, expenses, gross profit, net profit, and profit margins.**

**Improved decision-making through actionable insights derived from data analysis and visual trends.**

**Time-saving automation of data collection and reporting processes using Python.**

**Increased financial transparency and awareness for business stakeholders, even with minimal technical expertise.**

**Conclusion**

**The development of a Profitability Dashboard for Small Businesses demonstrates how data analytics and visualization tools like Python and Excel can empower small business owners to make smarter financial decisions. By sourcing and analyzing data from Kaggle, the project successfully showcases how real-time profitability tracking and performance monitoring can be achieved with minimal resources. The dashboard not only enhances operational visibility but also promotes efficiency, cost control, and strategic growth. This solution can serve as a valuable financial tool for small enterprises aiming for sustainability and scalability in a competitive market.**