PROJECT REPORT

Financial KPI Analysis for a Startups

1. Introduction

Early-stage startups face significant challenges in understanding their financial health and growth potential. Monitoring and analyzing **Key Performance Indicators (KPIs)** is critical for decision-making, securing funding, and optimizing operational efficiency. This project focuses on analyzing **monthly revenue, burn rate, Customer Acquisition Cost (CAC), Lifetime Value (LTV), and run rate** using financial and customer data.

The analysis leverages **Excel, Tableau, and Python (Pandas)** to provide insights through structured reports, dashboards, and cohort analysis.

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2. Objectives

- Track **monthly revenue** trends to evaluate growth.
- Calculate **burn rate** to measure cash outflow and financial sustainability.
- Compute **Customer Acquisition Cost (CAC)** and **Lifetime Value (LTV)** to assess marketing efficiency.
- Derive **LTV : CAC ratio** as an investor-focused metric for unit economics.
- Estimate **run rate** to project future revenue potential.
- Visualize performance trends using dashboards and perform **cohort analysis** on customer groups.

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3. Methodology

3.1 Data Collection

- Gathered startups financials: **Revenue, R&D Spend, Admin Expenses, Marketing Spend, Total Expenses**.
- Collected customer data: **New Customers, Active Customers, and Churn Rate**.

3.2 KPI Computation

1. **Revenue Growth** = Month-over-Month % Change in Revenue.
2. **Burn Rate** = Total Expenses – Revenue (or monthly cash outflow).
3. **CAC** = Marketing Spend ÷ New Customers.
4. **LTV** = ARPU × Gross Margin × Average Customer Lifetime.
5. **LTV : CAC Ratio** = LTV ÷ CAC (Efficiency benchmark).

6. **Run Rate** = Monthly Revenue × 12.

3.3 Tools & Techniques

- **Excel**: For raw data entry, cleaning, and basic KPI calculations.
- **Python (Pandas)**: For automated calculations, cohort analysis, and advanced trend modeling.
- **Tableau**: For interactive dashboard creation with KPI indicators, trend charts, and cohort heatmaps.

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4. Analysis & Insights

- **Revenue** shows consistent growth, but volatility in **burn rate** highlights the need for cost optimization.
- **CAC** remains high in initial months, reflecting early-stage marketing inefficiencies.
- **LTV : CAC ratio** stabilizes around 2.5x, indicating improving customer retention and efficient acquisition.
- **Run Rate** projects sustainable growth if revenue growth continues at current pace.
- **Cohort analysis** reveals stronger retention in customers acquired after Month 3, suggesting effective product-market fit.

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5. Deliverables

1. **Excel Model Template** – financial KPIs, automated calculations, and scenario testing.
2. **Tableau Dashboard** – interactive visualization of revenue trends, burn rate, CAC, LTV, and cohort heatmaps.
3. **PDF Report** – summarizing KPI findings, LTV:CAC ratio insights, and strategic recommendations.

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6. Conclusion

The Financial KPI Analysis project provides the startups with actionable insights into its financial performance and customer dynamics. By integrating **Excel, Python, and Tableau**, the startups gains a structured framework for monitoring critical KPIs. This enables **better decision-making, improved investor readiness, and long-term financial sustainability**.

The emphasis on **LTV:CAC ratio** and **cohort analysis** ensures that management can align growth strategies with customer behavior and market trends.
