PROJECT REPORT

Financial KPI Analysis for a Startups

1. Introduction

Early-stage startups often struggle to understand their financial health and growth.
This project analyzes key metrics like **revenue, burn rate, CAC, LTV,** and **run rate** using **Excel, Python,** and **Tableau** to give clear, data-driven insights for better decisions and sustainable growth.

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2. Objectives

- Tracked monthly revenue to see growth.
- Measured burn rate to understand spending.
- Calculated CAC and LTV to check marketing efficiency.
- Compared LTV:CAC ratio to judge profitability.
- Estimated run rate to predict future revenue.
- Used dashboards and cohort analysis to visualize performance.

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3. Methodology

Data Collection

- Collected startup financial data such as **Revenue, R&D Spend, Admin Expenses, Marketing Spend,** and **Total Expenses**.
- Gathered customer-related data including **New Customers, Active Customers,** and **Churn Rate**.

KPI Calculations

1. **Revenue Growth** = Percentage change in revenue compared to the previous month.
2. **Burn Rate** = Total Expenses – Revenue (shows how fast cash is being spent).
3. **Customer Acquisition Cost (CAC)** = Marketing Spend ÷ New Customers.
4. **Lifetime Value (LTV)** = Average Revenue per User × Gross Margin × Average Customer Lifetime.
5. **LTV : CAC Ratio** = LTV ÷ CAC (used to measure business efficiency).
6. **Run Rate** = Monthly Revenue × 12 (estimates yearly revenue).

Tools & Techniques

- **Excel:** Used for entering data, cleaning, and doing basic KPI calculations.
- **Python (Pandas):** Used for automating calculations, running cohort analysis, and identifying trends.
- **Tableau:** Used for creating interactive dashboards with KPI visuals, charts, and retention heatmaps.

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4. Analysis & Insights

Revenue is growing steadily, though burn rate fluctuations suggest better cost control is needed.
CAC was high early on but improved over time, raising the **LTV:CAC ratio** to around **2.5x**.
Cohort analysis shows customers acquired after **Month 3** have stronger retention, indicating a better product–market fit.

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5. Deliverables:

1. **Excel Model:** Automated financial KPIs and scenario analysis.
2. **Tableau Dashboard:** Interactive visuals for revenue, burn rate, CAC, LTV, and cohorts.
3. **PDF Report:** KPI summary, LTV:CAC insights, and recommendations.

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6. Conclusion

This project gives startups clear insights into their financial health and customer behavior.
By using **Excel, Python, and Tableau**, it creates a structured way to track key KPIs for smarter decisions and long-term growth.
Focusing on the **LTV:CAC ratio** and **cohort analysis** helps align growth strategies with real customer trends.
