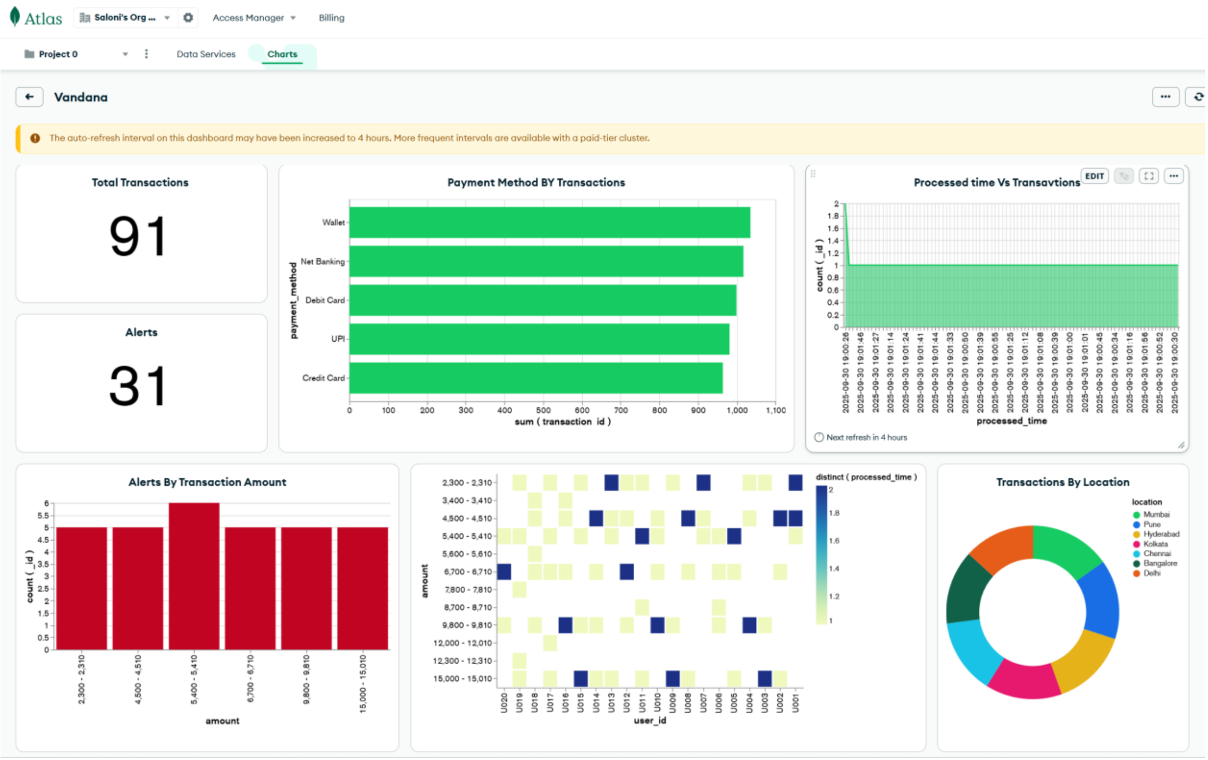

The auto-refresh interval on this dashboard may have been increased to 4 hours. More frequent intervals are available with a paid-tier cluster.

Great job 🎉 — I can see your **MongoDB Atlas dashboard** visualizing the transaction monitoring project. Here are some **insights you can add to your report** based on the charts in your screenshot:

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1. Transaction Volume

- **Total Transactions:** 91 captured in the monitoring period.
- **Alerts Triggered:** 31 (~34% of transactions flagged as suspicious), which is quite high — indicating either strict thresholds or genuine anomalies worth reviewing.

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2. Payment Methods

- Transactions are **evenly distributed across payment methods** (Wallet, Net Banking, Debit Card, UPI, Credit Card).
- Suggestion: Since no single payment channel dominates, monitoring rules should apply equally across all payment modes.

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3. Alerts by Transaction Amount

- Alerts are **clustered in mid-to-high value ranges (₹4,500 – ₹6,500, and ₹12,000+)**.
- This suggests your fraud detection logic is sensitive to large transaction values, which is realistic.

- Recommendation: Introduce **dynamic thresholds** (e.g., different alerting ranges for high-value customers vs. low-value customers).

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4. User Behavior Patterns

- The **heatmap** shows certain users (e.g., UID09, UID12) have multiple flagged transactions across varying amounts.
- This could point to **repeat suspicious behavior** by specific accounts.
- Recommendation: Consider **user-level anomaly scoring** instead of only transaction-level rules.

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5. Processed Time vs Transactions

- Transactions are being **processed consistently** (flat pattern, no spikes).
- This shows the Kafka pipeline + consumers are working without delays.

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6. Geographic Distribution

- Transactions come from **all major metros (Delhi, Mumbai, Pune, Bangalore, Chennai, Kolkata, Hyderabad)**.
- Distribution looks **balanced**, but alerts may be worth breaking down **per location** to detect regional fraud patterns.

✅ **Overall Insight for Report:**
Your pipeline successfully streams, enriches, and flags high-risk transactions in real time. While detection rules are working (catching 34% as suspicious), fine-tuning is needed to reduce false positives, especially in mid-value ranges. Future improvements could include **machine learning models for anomaly detection**, **user behavior profiling**, and **geo-based fraud risk scoring**.