TASK 5 : Define Usage Analytics Goals Problem: Identify key user behaviors and system usage metrics to track

What are Usage Analytics

Usage analytics involves collecting and analyzing data on how people interact with a product or service. This data reveals important insights such as which features users engage with most, how long they spend on tasks, and where they face challenge.These insights allow companies to make informed decisions that improve product usability and enhance the user experience.

Problem Definition

A video streaming system must balance UX (fast startup, smooth playback) with infrastructure constraints (bandwidth, queueing, compute). If there is poor streaming performance then the user will get frustrated and abandon the system.

The main goal is to identify which user behaviors and system usage metrics to track so product and ops teams can:

- detect user experience setback(like, rebuffering spike),
- understand feature adoption and engagement
- prioritize engineering or product changes with measurable impact.

Key User Behaviors to Track

1. Feature Adoption: Monitor which features (e.g., buffering control, playback speed, video quality selection) are actively used. Also identify adoption rates of newly released features.
2. Session Duration: Measure how long users actively engage with the platform per session.
3. Engagement Patterns: Track number of videos watched per session. And monitor interactions such as pause, rewind, or forward skips.
4. User Retention: Evaluate frequency of return visits. And monitor churn rates over weekly/monthly periods.

Key System Usage Metrics to Track

1. Buffering Events: Count and duration of buffering occurrences per session. And identify patterns leading to high buffering rates.

2. Playback Quality: Track how often users select different video resolutions (auto vs. manual). And measure how frequently the system adjusts video quality based on the user's connection.

3. Error Rates: Track failed playback attempts. And measure stream interruptions due to connectivity or server issues.

4. Queue Management: Monitor average wait time in video queues. And track how smoothly the video switches when the system is under load.

Business Value & User Insights

- Improved User Experience: Reduce buffering and interruptions by identifying pain points.
- Feature Prioritization: Focus development on features with high adoption or low engagement.
- Retention Growth: Use session and engagement data to design retention strategies.

Conclusion

The defined analytics goals provide a structured approach to measure user behavior and system performance. Tracking these metrics will enable data-driven decisions, enhance user satisfaction, and align product growth with business objectives.