Music Recommendation System

Spotify's market challenge is to convert more users to paying customers, reduce churn rate, and increase revenue per user.

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Problem Definition

Spotify faces a highly competitive market with low profitability due to small paying user base and high churn rate.

1 Low Conversion

Small conversion to paying customers.

2 High Churn Rate

Really high churn rate.
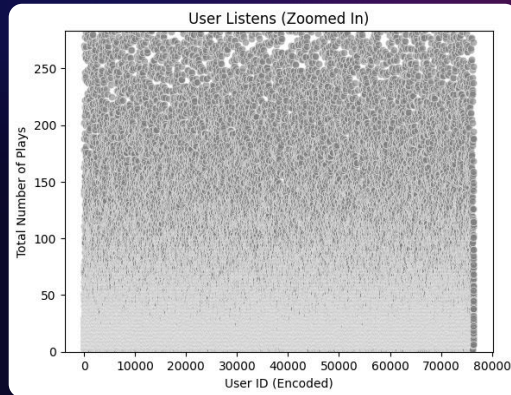
3 Revenue Increase

Need to increase average revenue per user.

Understanding the Starting Situation

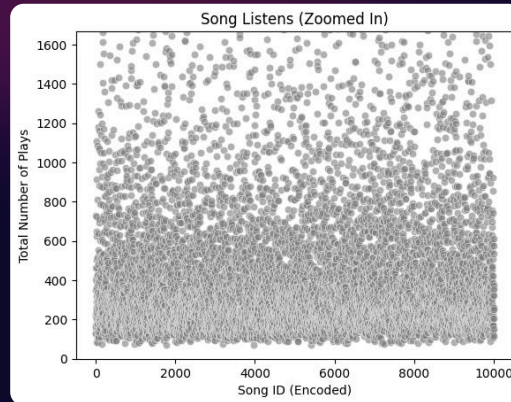There's a large dispersion in both user listens and song listens, indicating varied user preferences.
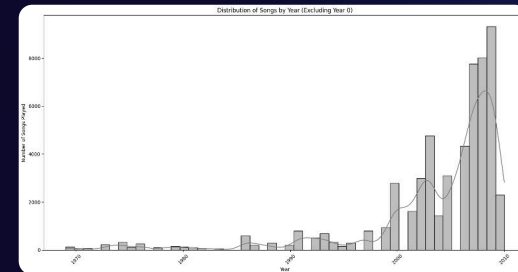
User Listens

Large dispersion of listens per user.

Song Listens

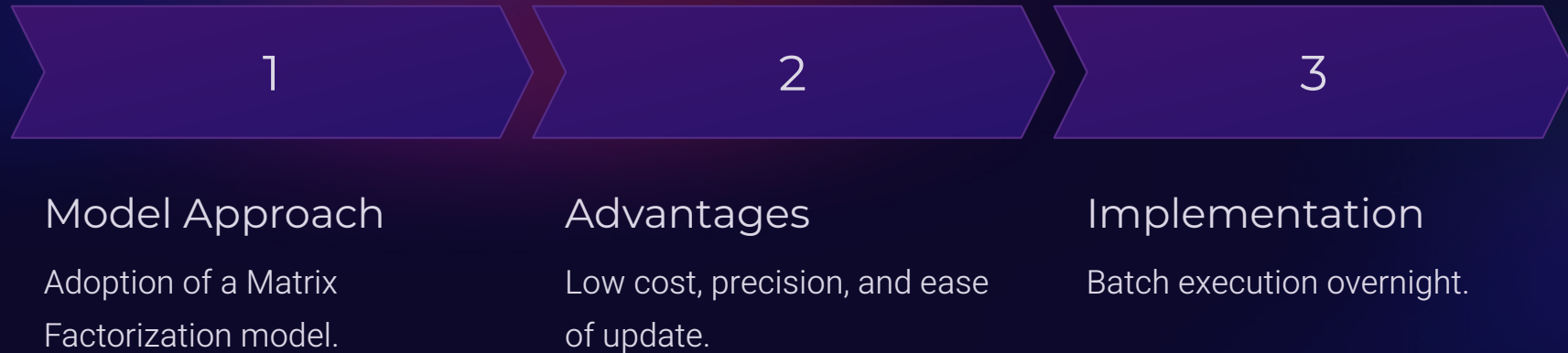High dispersion of listens per song.

Annual Song Releases

Yearly growth in song availability showcases Spotify's expanding music variety

Designing the Recommendation Engine

Spotify's Matrix Factorization model for collaborative filtering offers low cost and reasonable accuracy.

1

2

3

Model Approach

Adoption of a Matrix Factorization model.

Advantages

Low cost, precision, and ease of update.

Implementation

Batch execution overnight.

Solution to the Problem

The recommendation system aims to enhance user experience and positively impact business metrics.

User Experience

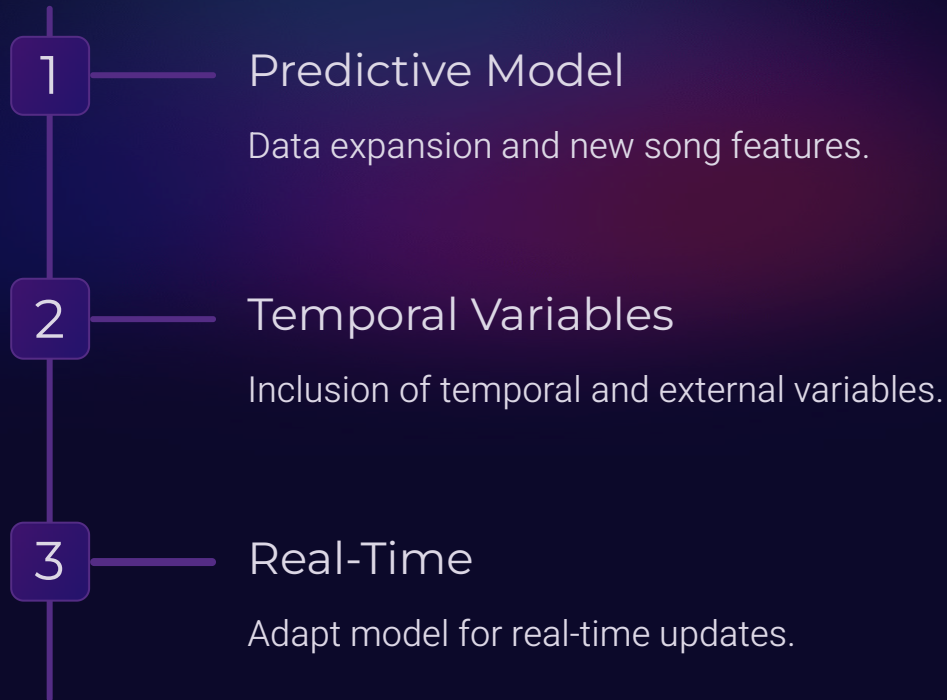Enriches user interaction with Spotify.

Business Impact

Reduces churn rate, boosts subscriptions.

Solution Choice

Operational efficiency and model performance.

Improvement Elements

Enhancements to the predictive model and real-time updates are crucial for Spotify's recommendation system.

1 Predictive Model

Data expansion and new song features.

2 Temporal Variables

Inclusion of temporal and external variables.

3 Real-Time

Adapt model for real-time updates.

Final Conclusions: Strategic Recommendations and Benefits

Recommendation

Implement music recommendation funcionality

Model Enhancement

Continue model develment for real-time execution

Monitoring

Implement KPIs for model usage and evolution

Profitability

Boost financial outcomes

Personalization

Customize user experience

Engagement

Enhance user engagement.