Case Study: Business & Market Understanding for Augmented Reality (AR) in E-commerce - Flipkart

"Augmented Reality (AR) Try-On."

Augmented Reality (AR) Try-On Feature:

Overview:

The AR Try-On feature allows users to virtually try on products such as clothing, accessories, eyewear, and cosmetics using augmented reality technology within the Flipkart app.

Introduction:

Augmented Reality (AR) technology has revolutionized various industries, including e-commerce, by offering immersive and interactive experiences to consumers. This case study examines the business and market understanding of integrating AR technology into e-commerce platforms, focusing on Flipkart's potential adoption of AR for its online shopping experience.

Rationale for AR Integration:

Integrating AR technology into Flipkart's platform addresses these challenges by providing users with an immersive and interactive shopping experience. AR enables users to visualize products in their real-world environment, try on virtual clothing, and preview furniture placement before making a purchase decision. By bridging the gap between online and offline shopping experiences, AR has the potential to increase user engagement, reduce return rates, and enhance customer satisfaction.

Business Impact:

The adoption of AR technology aligns with Flipkart's strategic objectives of driving innovation, improving customer experience, and differentiating itself from competitors. By offering a unique and compelling shopping experience through AR, Flipkart can attract new customers, increase customer loyalty, and

drive incremental sales. Additionally, the data collected from AR interactions can provide valuable insights into user preferences and behavior, informing future marketing and product development strategies.

Business Requirement Document (BRD) for Augmented Reality (AR) Try-On Feature in Flipkart:

1. Objective:

The objective of this feature is to enhance the online shopping experience on Flipkart by enabling users to virtually try on products using augmented reality technology, thereby reducing return rates and increasing customer satisfaction.

2. Scope:

The AR Try-On feature will be available for select product categories such as apparel, accessories, eyewear, and cosmetics. It will allow users to visualize products in their real-world environment using their smartphone camera and AR overlays. The feature will be integrated into the Flipkart mobile app for both iOS and Android platforms.

3. User Stories:

As a user, I want to be able to try on clothing and accessories virtually to see how they look and fit before making a purchase. As a user, I want the AR Try-On feature to be intuitive and easy to use, with options to adjust product placement and scale. As a user, I want to be able to try on different variants of a product, such as different colors or styles, to compare options. As a user, I want the AR Try-On experience to be realistic and accurate, providing a true representation of how the product will appear in real life.

4. Technical Requirements:

Integration with AR development frameworks such as ARCore (for Android) and ARKit (for iOS) to enable AR experiences on mobile devices.3D modeling and rendering of product catalog to create realistic virtual representations of products for AR Try-On. Backend infrastructure to support real-time data exchange between the Flipkart app and AR rendering engine. Integration with

Flipkart's existing product catalog and inventory management system to ensure accurate product availability and pricing information.

5. Timeline:

Phase 1 (3 months): Research and development phase, including technical feasibility assessment and prototyping.

Phase 2 (6 months): Implementation of AR Try-On feature for select product categories and initial user testing.

Phase 3 (3 months): Fine-tuning and optimization based on user feedback, with a focus on improving usability and performance.

Product Requirement Document (PRD) for Augmented Reality (AR) Try-On Feature in Flipkart:

1. Feature Overview:

The AR Try-On feature enables users to visualize select products in their real-world environment using augmented reality technology, providing a virtual try-on experience.

2. User Experience:

Users will access the AR Try-On feature directly from eligible product pages within the Flipkart app.

Upon activation, users will use their smartphone camera to scan their environment and place virtual product overlays onto themselves or their surroundings.

Users can adjust the placement, scale, and orientation of virtual products to ensure accurate visualization and fitting.

3. Functionality:

Real-time AR rendering of product overlays based on user input and environmental context. Option to try on different variants of a product, such as different colors or styles, for comparison. Seamless integration with Flipkart's

existing checkout and payment processes to facilitate purchases directly from the AR Try-On experience.

4. Design & Interface:

Intuitive and user-friendly interface with clear instructions and guidance for initiating and using the AR Try-On feature.

Minimalistic design to keep the focus on the virtual product overlays and user interactions.

5. Metrics & Analytics:

Key Performance Indicators (KPIs) to track the success of the AR Try-On feature, including usage metrics (e.g., number of AR Try-On sessions), conversion rates, and user satisfaction scores.

Integration with analytics tools to collect user feedback and behavior data for iterative improvements.

6. Testing & QA:

Comprehensive testing across various device types and operating systems to ensure compatibility and performance.

User testing with a diverse group of users to gather feedback on usability, accuracy, and overall satisfaction with the AR Try-On experience.

7. Conclusion:

The AR Try-On feature in Flipkart aims to revolutionize the online shopping experience by providing users with a realistic and immersive way to try on products before making a purchase, ultimately driving higher conversion rates and customer satisfaction.

Business Enhancement:

Differentiation: The AR Virtual Showroom sets Flipkart apart from competitors by offering a unique and immersive shopping experience.

Increased Engagement: Users spend more time interacting with products in the virtual showroom, leading to higher engagement metrics and increased brand loyalty.

Enhanced Conversion Rates: Visualizing products in a realistic environment increases user confidence and reduces hesitation, leading to higher conversion rates and sales.

Premium Placement: Brands can pay for premium placement within the virtual showroom, creating an additional revenue stream for Flipkart.

Scope: The AR Virtual Showroom feature will be available for select product categories such as furniture, home decor, electronics, and fashion accessories, with a curated selection of products showcased in the virtual environment.

Productivity Enhancement:

Efficient Inventory Management: Employees can use the AR tool to quickly scan and identify products in the warehouse, reducing time spent searching for items.

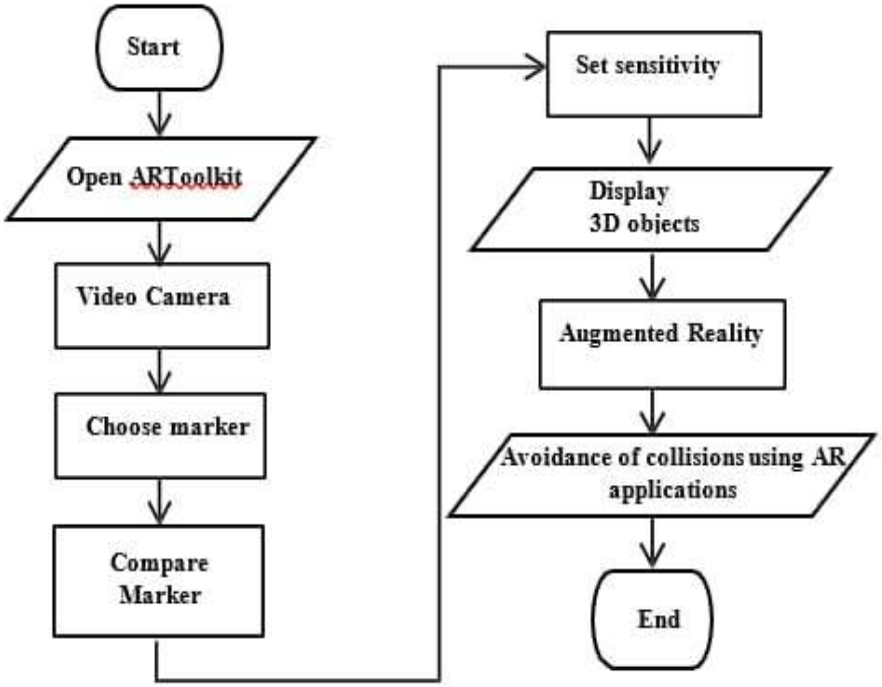
Accurate Product Identification: AR overlays display product information, including SKU numbers, descriptions, and inventory levels, ensuring accurate identification and management.

Visual Merchandising: Employees can use the AR tool to visualize how products will appear in retail displays or promotional campaigns, optimizing layout and presentation.

Remote Collaboration: The AR tool enables remote employees to virtually collaborate on product management tasks, reducing the need for in-person meetings and site visits.

Scope: The AR product visualization tool will be accessible to Flipkart employees involved in inventory management, logistics, merchandising, and marketing, integrated into the internal operations platform for seamless workflow integration.

Flow Chart:


Start
Open ARToolkit
Video Camera
Choose marker
Compare Marker
Set sensitivity
Display 3D objects
Augmented Reality
Avoidance of collisions using AR applications
End