

Success Story

Developing an AI shopping assistant for a leading fashion e-commerce company in the US

Customer

Leading
E-commerce Brand

Country

United States

Industry

E-commerce

About the Client

The client is a leading US-based apparel e-commerce platform, tailored for tech-savvy millennials and Gen Z shoppers who value seamless, personalized, and immersive online experiences. Unlike traditional online clothing stores, this platform goes beyond mere transactional experiences, creating a holistic digital ecosystem that speaks directly to the values, preferences, and technological expectations of younger generations.

Tech Stack



Business Situation

Gen Z shoppers, in particular, demand intuitive and visually engaging experiences that align with their fast-paced digital lifestyles. Finding clothing that matches their unique style or replicating a desired look often inspired by social media or other platforms can be a tedious and time-consuming process. This disconnect usually leads to frustration, abandoned carts, and missed opportunities for businesses to engage and convert these digitally native consumers.

Recognizing this gap, the client envisioned an AI-driven shopping assistant with a focus on catering to the evolving buying behaviors of Gen Z. They wanted a platform that seamlessly integrates visual search technology, personalized outfit recommendations, and virtual try-ons. They aimed to simplify decision-making while creating an engaging and immersive journey from discovery to checkout, turning online shopping into an inspiring, effortless, and enjoyable experience.

To bring this forward-thinking solution to life, the client collaborated with Unthinkable Solutions to utilize our expertise in developing custom AI solutions for e-commerce platforms.

Some of the primary requirements the client needed us to address were:

- ✔ Design and strategize the entire development process for the AI shopping assistant, recommending an optimal software architecture, technology stack, and essential features.
- ✔ Develop a user-friendly interface that allows users to easily upload wardrobe data including manual entries and photo uploads.
 - Integrate machine learning models capable of analyzing user preferences, clothing patterns, and purchase history to suggest
- ✔ tailored outfits.
 - Leverage augmented reality (AR) and 3D imaging technology to enable virtual try-ons that allow users to visualize how outfits will
- ✔ look before purchase.
- ✔ Design an engine that groups clothing, shoes, and accessories into cohesive ensembles for seamless cross-category shopping.

The Solution We Provided

The development process began with collaborative sessions to understand the client's vision and desired outcomes from the new features. These discussions helped us identify user pain points, clarified the objectives of the AI shopping assistant, and outlined key user personas to align the solution with. Detailed workflows and feature maps were created to ensure the seamless integration of the new feature into the platform.

In the planning and design phase, the team devised a development roadmap tailored to this specific feature. Wireframes and prototypes demonstrated how users could select an image, view matching or complementary products, and quickly add them to their cart. Iterative reviews ensured the designs aligned with the client's existing platform's aesthetic.

The Backend development focused on evolving the platform's existing infrastructure to support AI-powered visual search and real-time outfit recommendations. The system was enhanced to securely process images and deliver precise product matches based on style, color, and fit. The integration of scalable algorithms ensured the feature could handle a high volume of user interactions without compromising performance.

Rigorous testing validated the functionality and accuracy of the shopping assistant, confirming that recommendations matched user expectations and workflows were effortless. Scalability testing ensured that the platform could manage increased traffic driven by this feature. Post-deployment, continuous monitoring, and feedback loops were established to refine the feature, ensuring it remained aligned with user needs and market trends.

Developing awe-inspiring features for GenZ shoppers

Shop the Look

This feature was integrated to allow users to effortlessly recreate outfits from images, whether sourced from social media or uploaded directly. The AI scans the image, identifies clothing items, and recommends similar or complementary products from the catalog. Users can quickly assemble complete outfits based on their preferences, making the shopping experience more interactive and personalized. It simplifies decision-making, enhances inspiration, and streamlines the path to purchase.

Virtual Try-ons

We included virtual try-ons to bridge the gap between online and in-store shopping experiences. The platform simulates how outfits will look and fit based on user-provided measurements or uploaded images by using AI and augmented reality. This reduces uncertainty, minimizes returns, and enhances buyer confidence.

Digital Wardrobe

The digital wardrobe feature was designed to help users seamlessly organize & manage their clothing collection. Users can quickly access what they need for any occasion by classifying wardrobe items based on criteria such as casual, formal, ethnic, party, and sportswear. This feature empowers users to make better use of their wardrobe, identify gaps, and make smarter shopping choices.

Outfit Recommendations

The recommendation feature was integrated to simplify decision-making & maximize the value of users' wardrobes. By using LLM models, the platform analyzes purchase history, wardrobe data, and personal preferences to recommend cohesive outfits for various occasions. This feature was included to help users save time, reduce decision fatigue, and avoid impulsive or unnecessary purchases.

The Impact

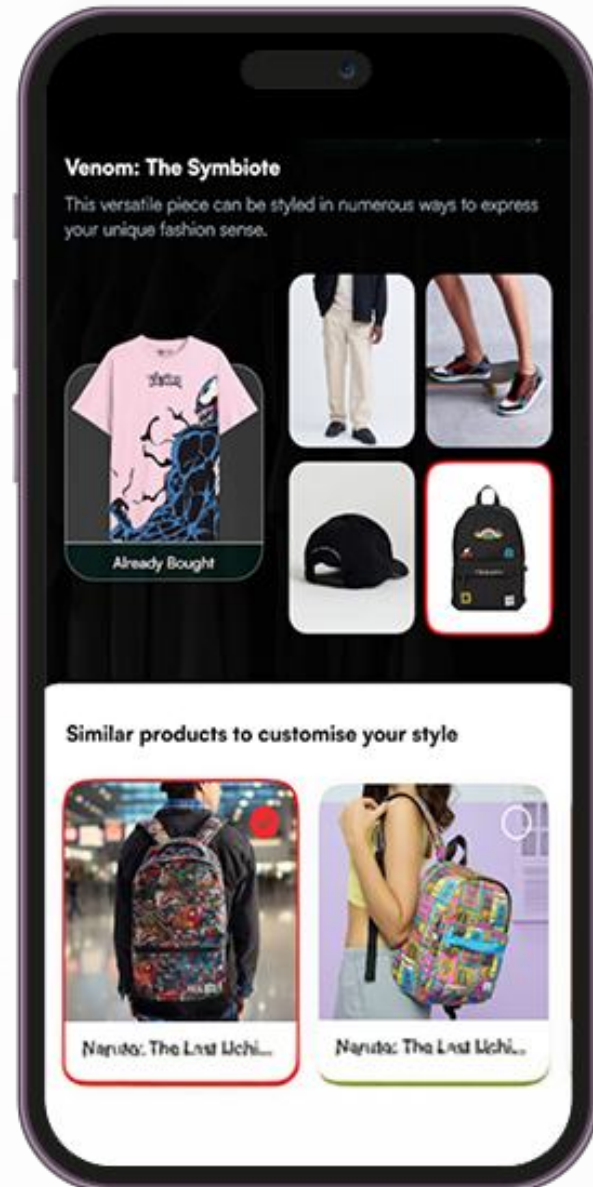
The introduction of the AI shopping assistant significantly improved the client's e-commerce platform, boosting user engagement and sales. By solving the challenges faced by tech-savvy millennials and Gen Z shoppers, the platform provided a smooth and enjoyable shopping experience. Features like virtual try-ons and personalized outfit suggestions made it easier for users to find what they wanted, reducing the chances of them abandoning their carts. This made shopping quicker and more enjoyable which increased sales and encouraged customers to return. The innovative features also built strong brand loyalty as shoppers began to see the client as a top choice for online shopping. Overall, the AI-driven improvements helped the client stay ahead in the competitive e-commerce market.

15,000+	Products sold through image-based searches
40,500+	Virtual tryons
40%	Sales increased

Product Snapshots



Shop the Look feature



Outfit Recommendations

Is there a digital platform you want to build or take to the next level?

Setup a personalized consultation with our technology expert.

Let's Talk