

ALGONOMY

AI for the Ultimate Personal Shopper Experience



Revolutionizing product discovery & engagement by
replicating the in-store experience online

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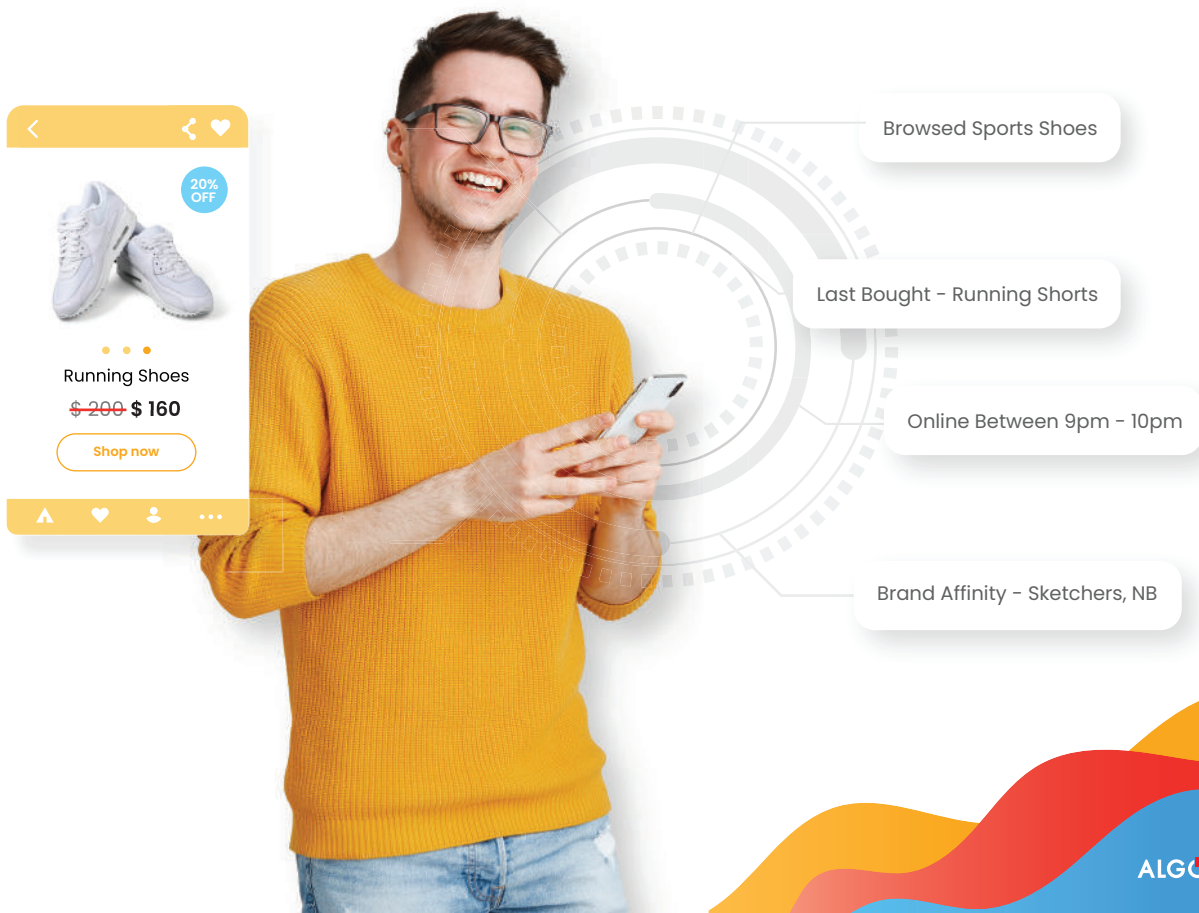
Introduction

In the ever-evolving landscape of ecommerce, the integration of Artificial Intelligence (AI) has been nothing short of revolutionary.

The concept of personal shopping, once a luxury service offered in high-end stores, has been transformed by AI into an accessible and highly personalized online experience.

This eBook delves into the heart of this transformation, exploring how AI is redefining the way consumers interact with ecommerce platforms and how retailers are adapting to these changes.

Whether you are a retailer looking to implement AI as part of your ecommerce personalization strategy, a technologist interested in the mechanics of AI systems, or a consumer curious about the future of online shopping, this eBook will guide you through the fascinating world of AI and its impact on the personal shopper experience.



Understanding AI-Powered Personalization



AI's ability to process data in real time and adapt on the fly to create personalized experiences is a crucial advantage for ecommerce retailers. It also helps that AI isn't prone to human mistakes and can work 24/7.

AI goes beyond traditional personalization methods by leveraging advanced algorithms, machine learning, and data analytics to scan volumes of customer data and deliver information to an individual based on one's specific behavior.

In the context of ecommerce, this might involve dynamically adjusting product recommendations, optimizing website content based on user engagement patterns, tailoring the search and browsing experience to accelerate discovery, and even predicting future preferences to create a seamless and personalized shopping journey.

Retailers have taken note. AI-powered ecommerce solutions are expected to form a market of \$16.8 billion by 2030, with a CAGR of 15.7% over the next eight years.¹ Consumers see value in it, too. A quarter of millennials (26%) say they have used an AI tool to help with shopping in the past 30 days. Moreover, users of such tools say they found them helpful and unique.²

¹<https://www.businessdit.com/ai-in-ecommerce/>

²<https://pro.morningconsult.com/analyst-reports/consumer-views-generative-ai-ecommerce>

And what do you need to personalize with AI successfully?

Data, algorithms, and a bridge to connect disparate sources of truth.



Rich and Relevant Data

AI thrives on data. To effectively personalize the customer experience, ecommerce platforms require access to a comprehensive dataset, including user preferences, behaviors, purchase history, and contextual data such as location and device type.



Robust AI Algorithms

The effectiveness of AI-powered personalization relies on the sophistication of the underlying algorithms. Powerful machine learning models are essential for analyzing and interpreting complex datasets, continuously learning from user interactions, and refining personalization strategies over time.



Seamless Integration

AI solutions should seamlessly integrate with existing ecommerce systems, ensuring a smooth flow of data and insights. Compatibility with various platforms and technologies is crucial for a cohesive and unified personalization strategy.

AI-powered ecommerce solutions are expected to form a market of \$16.8 billion by 2030.

AI for a Personal Shopper Experience



The rise of AI-powered personalization marks a significant shift in consumer expectations and retail strategies. No longer is personal shopping confined to the realm of physical interactions; it has expanded into the digital space, offering tailored recommendations and insights at the click of a button.

In this chapter, we will uncover the intricacies of AI in personal shopping. We will explore the technologies that make it possible, as well as the benefits it brings to both consumers and retailers.

From machine learning algorithms that predict shopping preferences to chatbots that provide real-time assistance, AI is at the forefront of a shopping revolution.

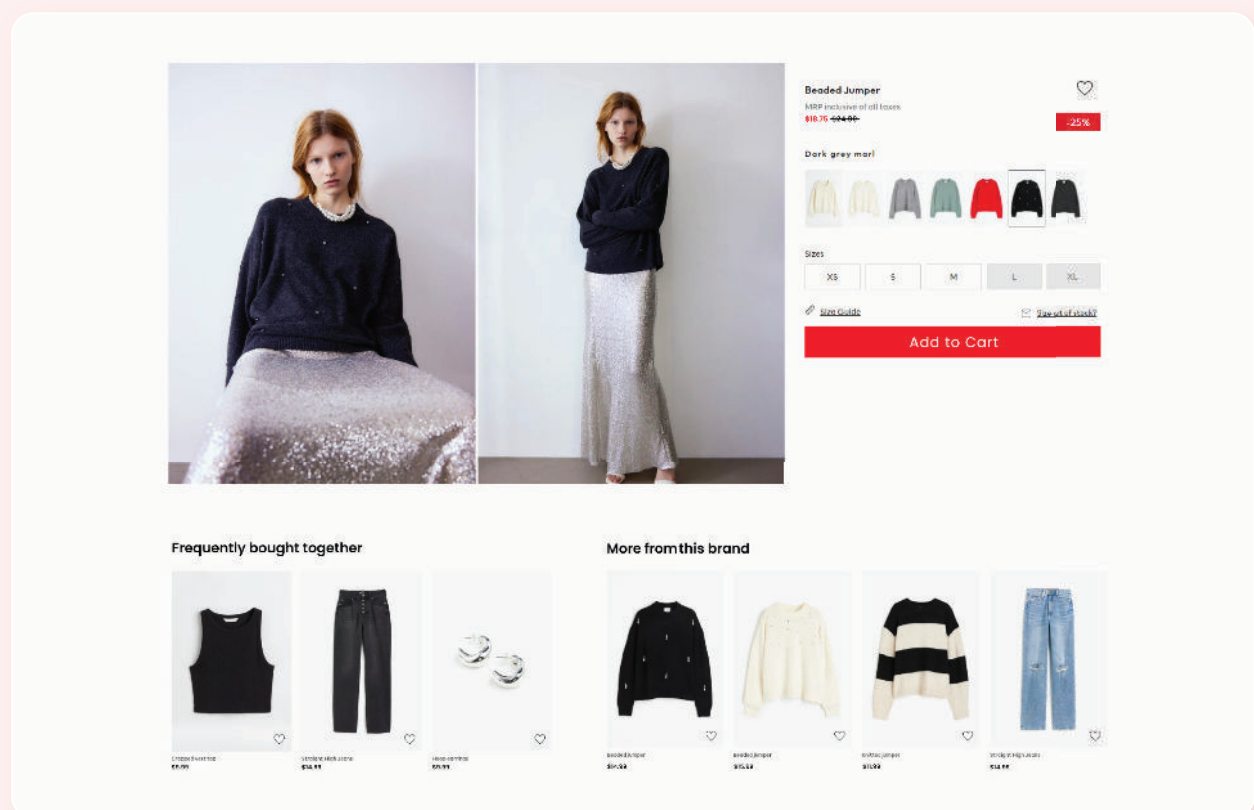
Machine Learning

The cornerstone of 1:1 ecommerce personalization is using machine learning to offer precise product recommendations across every touchpoint. It goes beyond basic algorithms, delving into robust affinity profiling in real time.

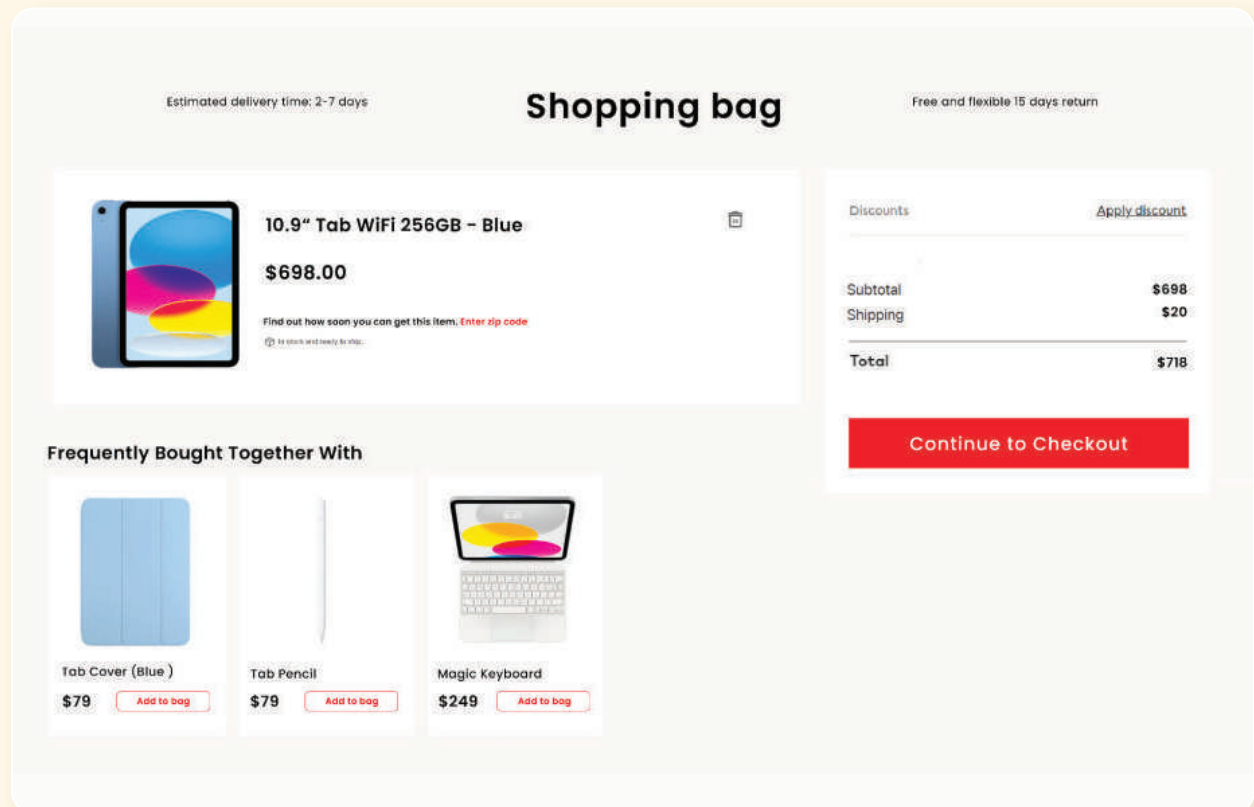
With each digital interaction, the user's affinity profile evolves, creating a nuanced understanding of their preferences and, in turn, powering contextual algorithmic decisioning.

Here are two everyday use cases:

Product Pages: On the product detail page, retailers can show customers items that are frequently bought together – suggesting complimentary products they'd need with their purchase. If there is data showing that the shopper tends to check out products from a particular brand more than others, a retailer can cater to their tastes with more suggestions from that very brand.



Cart Checkout: When the customer is about to complete their purchase, retailers can suggest often-bought-together items or products that match their purchase. For example, if they are about to buy an electronic device, retailers can offer a protective case or batteries. If a recurring customer purchases items they purchased before, AI can detect if they've left something out and remind them to add them to their cart.



Algonomy Recommend™ provides an exhaustive library of 150+ recommendation strategies that can be employed out of the box for a shorter time to value. Xen AI, Algonomy's decisioning engine, selects the 'king of the hill' – the most effective strategy from this library – to tailor each customer interaction. Depending on merchandising priorities, retailers could show the most suitable recommendations at different locations and points in the shopper journey.

Benefits for Consumers



- Offers personalized product recommendations tailored to individual preferences and behaviors, enhancing the shopping experience.
- Facilitates discovery of relevant products across various touchpoints, leading to a more efficient and satisfying shopping journey.
- Increases convenience by suggesting complementary items or accessories that align with the shopper's interests and values, streamlining decision-making.

Benefits for Retailers



- Improves customer engagement and satisfaction by delivering personalized recommendations that increase the likelihood of conversion.
- Enhances sales performance by leveraging real-time machine learning algorithms to optimize product suggestions based on user behavior.
- Maximizes revenue opportunities by strategically placing recommendations throughout the shopper journey, increasing average order value and conversion rates.

Case Study

How eXtra Used Recommend™ to Get 52% Higher AOV from Recommendations

Visual AI

Visual AI, powered by deep learning, is revolutionizing product discovery for ecommerce shoppers who are hoping for some help in narrowing down what items – when bought together – will maximize visual appeal.

It "looks at" the actual contents of an image and extracts features such as design patterns, colors, and styles automatically. The visual recommendation engine then identifies priority aspects and displays similar-looking and compatible products.

The screenshot displays a product page for "Women Black & Grey Striped Lounge Pants". The main product image shows a model wearing the pants. To the right, the product details include a 4.3-star rating from 309 reviews, a price of \$18.75 (discounted from \$24.99), and a "SELECT SIZE" dropdown menu with options S, M, L, XL, and XXL. Below the product image, a "Similar Items" section features six other lounge pants: Women Striped Lounge Pants (\$5.99), Striped Lounge Pants (\$14.99, only 3 left in stock), Cotton Knitted Lounge Pants (\$9.99, only 4 left in stock), Women Solid Lounge Pants (\$14.99), Women Ribbed Lounge Pants (\$15.99), and Women Printed Lounge Pants (\$11.99, only 3 left in stock). At the bottom, a "Complete The Look With" section suggests five complementary items: Women Green Sunglasses (\$7.99), Women White T-shirt (\$5.99), Black Hat (\$5.99), Women Black Leather Belt (\$9.99), and Women Brown Leather Purse (\$9.99).

Shoppers can browse lookalike and complementary products with Visual AI

Meet Alex, a fashion enthusiast browsing for new pants. She lands on a product she likes – black, striped, mid-rise lounge pants.

DeepRecs Visual AI™ gets to work and surfaces recommendations for similar-looking products with slight variations in the thickness of stripes, color combinations, the fit of the pants, etc.

It goes further by leveraging image intelligence to suggest other apparel items and accessories that will complement the pants she is looking at. These ‘complete the look recommendations’ enrich her visualization and maximize exposure to relevant accessories in the catalog.

Benefits for Consumers



- Streamlines product discovery by providing visually similar and complementary product recommendations based on specific preferences.
- Enhances the shopping experience by offering personalized suggestions for items that align with the shopper's unique style and preferences.
- Simplifies decision-making by showcasing complete looks and accessories that complement the initially selected product, helping consumers envision their overall outfit.

Benefits for Retailers



- Increases customer engagement and satisfaction by delivering more relevant product recommendations, leading to higher conversion rates.
- Optimizes inventory management by promoting related products and accessories, potentially increasing the average order value (AOV).
- Enhances brand loyalty as consumers perceive the retailer as providing a comprehensive and curated shopping experience.

Natural Language Processing (NLP)

Catalogs will only sometimes have the most updated and high-quality photos. Even so, there's great value in describing something in detail. Consumers look to text descriptions – and marketing copy – to learn about several product attributes such as material, dimensions, occasion, the mood or feeling a product could evoke, etc.

Deep learning models on product discovery platforms utilize this wealth of written information to find and surface new, seasonal, and long-tail products that would otherwise be buried due to a lack of behavioral or co-purchase data.

Featured Item



Christmas Flower Arrangement

Elevate your **dining** table with our enchanting **Christmas centerpiece** bouquet. Lush **fir** trees, **red berries**, and cotton create a **cozy festive** ambience.

Recommended Match



Christmas Table Runner

Introducing our charming **Christmas** table runner, the perfect complement to your **festive dining** setup. Use it to enjoy a **warm holiday** aesthetic.

NLP can uncover complementary products based on word associations

In the example illustrated below, the shopper looks at a floral arrangement. Its colors are Christmas-themed, and it's made up of red roses that evoke a 'warm, holiday dinner' aesthetic.

DeepRecs NLP™ extracts attributes from the product description (even reviews) and finds related products based on feature complements, semantic similarity, and word vectors. It recommends a dining table runner with red flowers and holly leaf motifs for their 'cozy, festive' decorations.

Benefits for Consumers



- Improves product discovery by analyzing text descriptions and reviews to suggest related items based on semantic similarity and feature complements.
- Enables shoppers to find products with specific attributes or moods, enhancing their ability to match products to their preferences and needs.
- Enhances the shopping experience by presenting relevant product recommendations based on textual cues, even when visual information is limited.

Benefits for Retailers



- Expands the visibility of products by leveraging textual information, thereby increasing the chances of discovery for new, seasonal, or niche items.
- Facilitates cross-selling opportunities by recommending products that complement each other based on textual attributes, potentially increasing sales revenue.
- Improves customer retention and loyalty by offering personalized product recommendations tailored to individual preferences, fostering a deeper connection with the brand.

Case Study

Game-changing DeepRecs NLP Improves Product Discovery of 2M+ Catalog with 96% Long-tail Items

Ensemble AI

Online product pages often leave shoppers feeling uninspired about how to put together different pieces. As shoppers can not see the full potential of an item, this leads to missed sales. Merchandisers need a way to create shoppable looks and styling advice that is not manual or resource-intensive.

Ensemble AI makes that possible. It is based on 'wisdom of the crowd' co-occurrence data, complementary color detection, and shoppers' behavior and preferences. This intelligence will recommend several options (each a complete outfit or an ensemble) for styling - keeping the shopper's product of interest as a constant. They can then pick from all the combinations that resonate with the outfit they first liked and shop an entire look - rather than just one piece of the puzzle.

Ensemble AI offers the shopper automated "How to Style it" suggestions that showcase curated outfits for their selection, boosting product discovery and purchase interest. The retailer saves time and money while ensuring a consistent brand aesthetic, and the shopper experiences a seamless and visually appealing ensemble suggestion, leading to an increase in average order value (AOV) and user engagement.

Algonomy Ensemble AI is a way to cross-sell your products while delighting your customers. It empowers merchandisers to create stunning outfits, product collections, or recommended bundles effortlessly. What's in it for the shoppers? Pre-curated looks take the guesswork out of assembling an outfit, reducing decision fatigue and improving shopping satisfaction.

Closet

WomenMenKidsHome & LivingBeauty

Search



Oversized Button-Front Jacket
\$ 20.99
4.3 ★ 309 Ratings

SELECT SIZE [SIZE CHART >](#)

S M L XL XXL

Add to bag

WISHLIST

Style it with



Cotton T-shirt
\$ 9.99



Oversized Button-Front Jacket
\$ 20.99



Regular Wide Jeans
\$ 14.99



Crossbody Bag
\$ 12.99



Regular Wide Jeans
\$ 14.99



Heart Earrings
\$ 7.99



Oversized Button-Front Jacket
\$ 20.99



Regular Tank Top
\$ 8.99

Curated looks make it easier for customers to visualize and assemble outfits

Benefits for Consumers



- Provides personalized styling advice and curated outfit recommendations, reducing decision fatigue and enhancing the shopping experience.
- Allows shoppers to visualize complete looks and ensembles that complement their selected item, facilitating easier purchasing decisions.
- Increases satisfaction by offering cohesive and visually appealing outfit suggestions, aligning with individual tastes and preferences.

Benefits for Retailers



- Boosts average order value (AOV) by encouraging shoppers to purchase multiple items as part of a coordinated ensemble.
- Enhances brand image and consistency by delivering curated outfit suggestions that align with the retailer's aesthetic and style.
- Saves time and resources for merchandisers by automating the creation of shoppable looks and styling advice, improving operational efficiency.

Guided Selling

Guided Selling introduces a new frontier in personalization by incorporating ‘zero-party data’ – information willingly shared by shoppers.

The shopper is presented with an interactive questionnaire. Upon submission of the quiz, products are dynamically selected based on a combination of the shopper’s inputs and behavioral data that has already been gathered about them.

Guided Selling extends its utility even when shoppers make purchases on behalf of others, as is often the case when buying gifts.

Picture Emily, a shopper looking for the perfect birthday gift for her friend. By presenting a series of well-crafted questions on the recipient's preferences, interests, and occasion, Guided Selling can intelligently suggest the most suitable gift options, ensuring that the chosen gift resonates with the recipient.

With **Guided Selling**, powered by Algonomy Recommend™, personalization isn’t limited to the current shopping session. It extends its reach into future interactions with the shopper. How? By seamlessly integrating the shoppers’ responses into their real-time customer or User Profile (UPS).

This integration allows optimization managers to apply merchandising rules based on these answers later in the shopping journey, creating an ongoing cycle of personalization. Imagine a beauty product quiz revealing that a shopper has blue eyes – future recommendations can now align with this attribute/preference.

Gift Finder

Gift finders ask shoppers a series of questions to find the best matches

Who will be receiving this gift?

Friend Family Member

Colleague Partner

Next

1

Who will be receiving this gift?

Friend Family Member

Colleague Partner

Next

2

Please select their gender.

Male Female

Non Binary Prefer not to say

Back Next

3

How would you describe them?

Romantic Optimist

Trendsetter Adventurer

Back Next

4

What would you like to give?

Jewelry Watches

Bags Dresses

Back Next

5

What's your preferred budget?

Low Medium

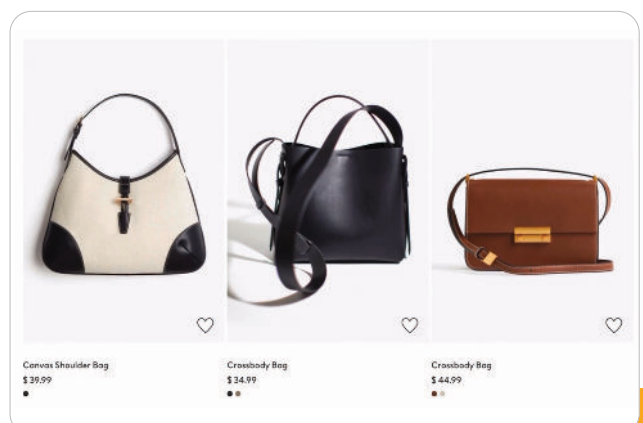
High No Preference

Back Next

6

Your personalized gift recommendations are ready!

7



Benefits for Consumers



- Facilitates personalized product recommendations based on voluntary responses, ensuring that suggested items resonate with individual preferences and needs.
- Simplifies the gift-buying process by guiding shoppers through a tailored questionnaire to identify the most suitable gift options for specific occasions and recipients.
- Enhances future shopping experiences by integrating shopper responses into their user profile, enabling ongoing personalization across interactions.

Benefits for Retailers



- Improves customer satisfaction and loyalty by offering personalized recommendations that align with shopper preferences, leading to increased conversion rates and repeat purchases.
- Enhances merchandising strategies by leveraging shopper data gathered through guided selling to tailor future product recommendations and marketing efforts.
- Optimizes inventory management by promoting relevant products based on shopper responses, reducing the likelihood of abandoned carts and improving overall sales performance.

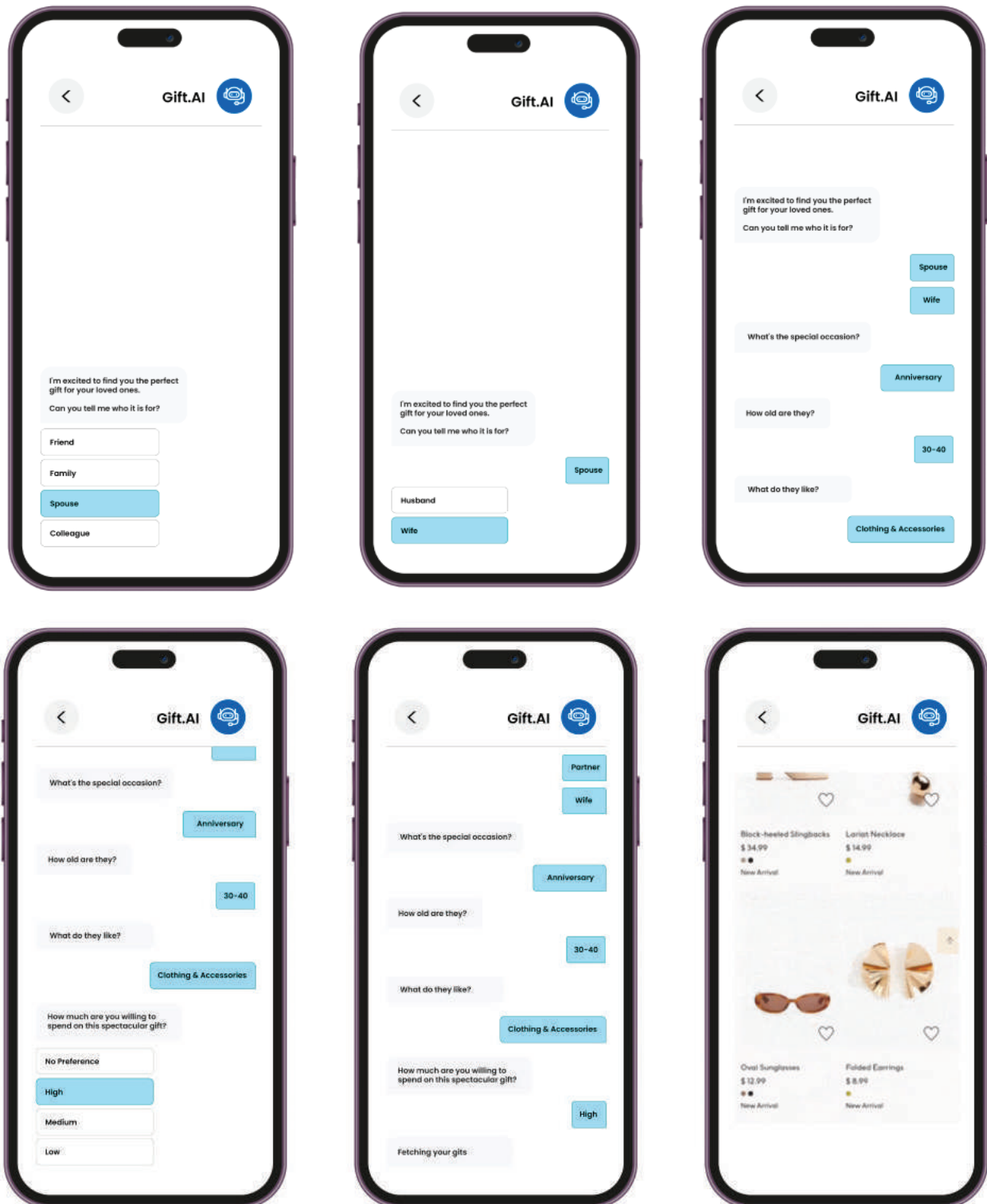
Product Finder via Chat

Imagine walking into a physical store and having no one to talk to! Online, too – when your shoppers are confronted with too many menu items, they will face analysis paralysis and soon disengage. A chatbot takes on the role of a conversational product finder that provides personalized shopping experiences for your customers and makes them purchase faster.

One study notes that 58% of customers say emerging technologies like chatbots and voice assistants are changing their expectations of companies.³ Customers expect human-like assistance on ecommerce channels, and often, the first step is to get them to the product they are looking for.

A chat interface accomplishes that by asking customers questions about their product preferences. The chatbot uses large language models to present shoppers with options of what they need to explore. The shopper can directly jump to the relevant section from the chat without navigating the website.

For example, Pat needs to find a gift for his wife. A chatbot pops up and offers to help him find what he wants. It strikes up a conversation with Pat – asking him questions and listening to his responses to present a list of items he can choose from.



Chatbots recommend products based on engaging conversations about a shopper's needs & preferences

Benefits for Consumers



- Offers personalized shopping experiences by engaging shoppers in conversational interactions to understand their product preferences and needs.
- Simplifies product discovery by presenting tailored options directly within the chat interface, reducing the need for manual navigation on the website.
- Enhances engagement and satisfaction by providing human-like assistance and guidance throughout the shopping journey, leading to faster purchasing decisions.

Benefits for Retailers



- Improves customer engagement and retention by offering interactive and personalized shopping experiences through chatbot interactions.
- Increases conversion rates by guiding shoppers to relevant products based on their preferences and needs, reducing the likelihood of disengagement or abandonment.
- Provides valuable insights into customer preferences and behavior through chatbot interactions, enabling retailers to optimize product offerings and marketing strategies.

Closing Thoughts

In the ever-evolving realm of ecommerce, the pivotal role of personalization becomes even more pronounced as we surge into 2024. It is not merely a strategic choice; it has become necessary for retailers aiming for transactions and enduring customer engagement.

The trends unveiled in this exploration paint a vivid picture of how personalization, powered by AI, is reshaping the dynamics between retailers and consumers. It transcends the conventional boundaries of static shopping experiences, ushering in a new era of dynamic, real-time, and anticipatory interactions.

What sets the path to success apart is understanding what shoppers want and predicting their needs before they articulate them. Algonomy spotlights this fusion of rich and relevant data, robust AI algorithms, and seamless integration, which forms the nexus of personalization triumph.

As Algonomy propels the discourse towards customer engagement, it underscores that this evolution isn't just about shopping—it's about creating memorable, intuitive, and profoundly human experiences that foster lasting connections between brands and their valued customers. In this future, personalization is not a feature; it's the very essence of a vibrant and engaged customer-retailer relationship.

Learn more about Algonomy's digital experience personalization solutions [here](#).



ALGONOMY

Algonomy helps consumer businesses maximize customer value by automating decisioning across their retail business lifecycle, with AI-enabled solutions for eCommerce, Marketing, Merchandising, and Supply Chain.

Algonomy is a trusted partner to more than 400 leading brands, with a global presence spanning over 20 countries. Our innovations have garnered recognition from top industry analysts such as Gartner and Forrester.

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