# Revolutionize Profits: Your Business's Secret Weapon

# Content

# Intro

Are you experiencing steady growth in team size and revenue? Does your product already deliver value to users? But are you hungry to take things to the next level with innovative technology?

This ebook is for you. We'll cut through the noise and skip the AI basics you already know.

No complicated schemes or tech jargon here – just **a straightforward guide to improving your digital product** for dynamic businesses like yours.
Get ready for a real-life story. CHI experts will share how they helped a US client scale up their initial product using cutting-edge approaches and technologies.

**Think of it as a practical blueprint for rapid growth, minus the confusion.**

**Download this ebook and discover:**

» **A relatable scaling story:** Learn from a real-world example, not dry theory.

» **Actionable insights:** Gain valuable knowledge directly from CHI experts – no fluff, all substance.

» **Simple yet powerful approaches:** Leave the tech jargon behind and focus on practical strategies for success.

# How do we know?

You are welcome to ask the AI Assistant on our website questions and receive detailed answers from our practical expertise and successful AI projects for retail, edtech, entertainment, healthcare, and fintech.

**chisw.com**

# Use case: A first-of-its-kind beauty platform

## Understanding the Audience: Unveiling Client Profile and Business Needs

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**Elena Morozova**
**Chief Project Officer**

Our research shows that AI and changing customer demands have affected all industries, with retail leading the charge. This ebook will showcase real-world retail advancements resulting from these changes.
But before we dive in, here's a candid disclosure: **AI/ML isn't a one-size-fits-all solution.**
Our approach emphasizes thoughtful consideration before integrating modern AI into products. Rushing into AI implementation can often result in wasted resources, budgetary strain, and lost time.

**To Get Started:** We kick off by closely examining what the client already has in place. We dig into their goals and determine what's bugging their customers.

**Building a Strong Base:** Our next step? We work on making the marketplace look and work even better to give customers a top-notch experience.

**Moving Ahead:** Once we've got all the information we need, we dive into using AI and AR tech. We tweak it all to fit the customers' needs by employing the most relevant tech.

## AI-Powered Scaling: Empowering Growth

This case study will explore how our client utilized AI technologies to achieve significant business outcomes, such as

### 8-10%

**Retention Boost**
8-10%+ increase in customer retention

### 25%

**Enhanced Customer Experience**
25% Improved satisfaction, loyalty & overall experience

### 10%

**Sales Growth**
Up to 10% increase in sales from personalized recommendations

### 5-8%

**Inventory Efficiency**
5-8% reduction in inventory costs & minimized stockouts

### 10%

**Cross-Selling & Upselling**
10% revenue growth from these strategies
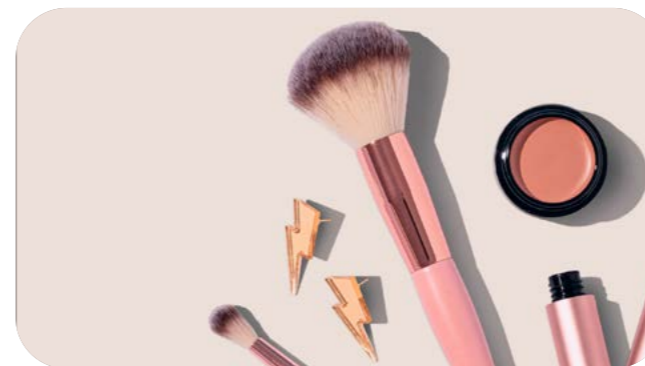
## Client profile

A fast-growing cosmetics and beauty retailer, our client operates a multinational chain of mono-brand stores and boasts a significant online presence.

To adapt to the changing needs of the beauty retail industry and address the needs of end-users, they sought to scale up their existing web and mobile solutions.

**Location**

🌐 **the US**

**Employee Count**

**1600 employees**

**Revenue**

💲 **$650 MM per year**

## Technological Maturity:

》 They employ fundamental AI tools and platforms but aim to create bespoke solutions tailored to address specific challenges or capitalize on opportunities.

》 Our client sought advanced AI integration customized to their unique business models and needs, surpassing off-the-shelf solutions.

## Our client's pain points summary:

### Efficient Scaling

Overcoming the challenge of scaling business operations without increasing overhead or complexity proportionally.

### Tailored Solutions

Customizing AI solutions to streamline some specific segments of operations or product offerings, optimizing efficiency.

### Data-Driven Insights

Harnessing the power of AI to enhance data utilization for predictive analytics and informed decision-making, driving strategic growth.

### Enhanced Customer Experience

Incorporating AI to enhance customer interactions and involvement, resulting in boosted customer retention and lifetime value.

### Talent Acquisition

Addressing the talent gap in AI and machine learning within teams, ensuring access to the expertise needed for successful implementation and innovation.
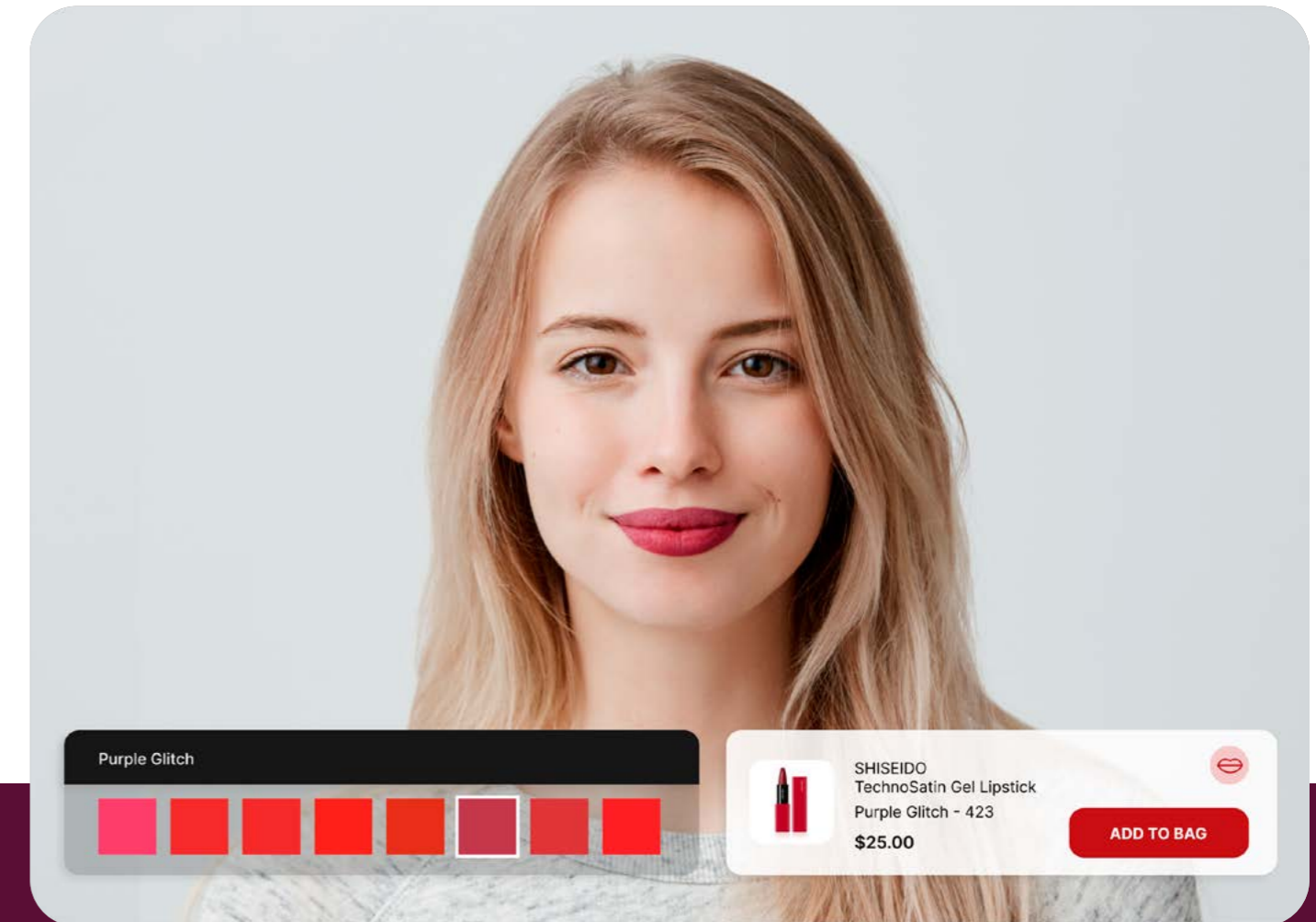


Purple Glitch

SHISEIDO
TechnoSatin Gel Lipstick
Purple Glitch - 423
$25.00

ADD TO BAG

## Inside the Buyer's Mind: Survey-Derived Client Persona Profile

### About:

Female, aged 25 and above, holds a stable job with sufficient income for a regular skincare routine, leads a healthy lifestyle, and follows celebrity/how-to content closely.

### Skincare Focus:

This focus prioritizes healthy skin and addresses issues related to problematic skin, such as acne, sensitivity, and aging.

## Buying persona pain points summary:

**01** | **User Interface Challenges:**

Unclear UI hampers navigation, slows product discovery, raises security concerns, and impedes essential functions like adding items to the cart and completing purchases.

**02** | **Lack of Personalization:**

Missing features for marking favorites or receiving tailored recommendations.

**03** | **Insufficient Support:**

Limited assistance for skincare concerns leads to dissatisfaction.

**04** | **Outdated Online Store Experience:**

Desire for a modern, immersive shopping experience like Dior's fitting room concept.

**After analyzing the collected information our team divided this project's improvement scope into phases.**

## Scaling Phases: Navigating the Evolution

**Phase 1**

**Marketplace Enhancement**
- UI/UX Design
- Functionality Improvement

**Phase 2**

**AI Consulting**
- Proposed iterative approach
- Gradually introduce new functionality
- Analyze results at each step

**Phase 3**

**CV Module**

**Result:** App with Face Analysis

**Phase 4**

**Recommendation System Module**

**Result:** Personalized Recommendation System

**Phase 5**

**AR Module**

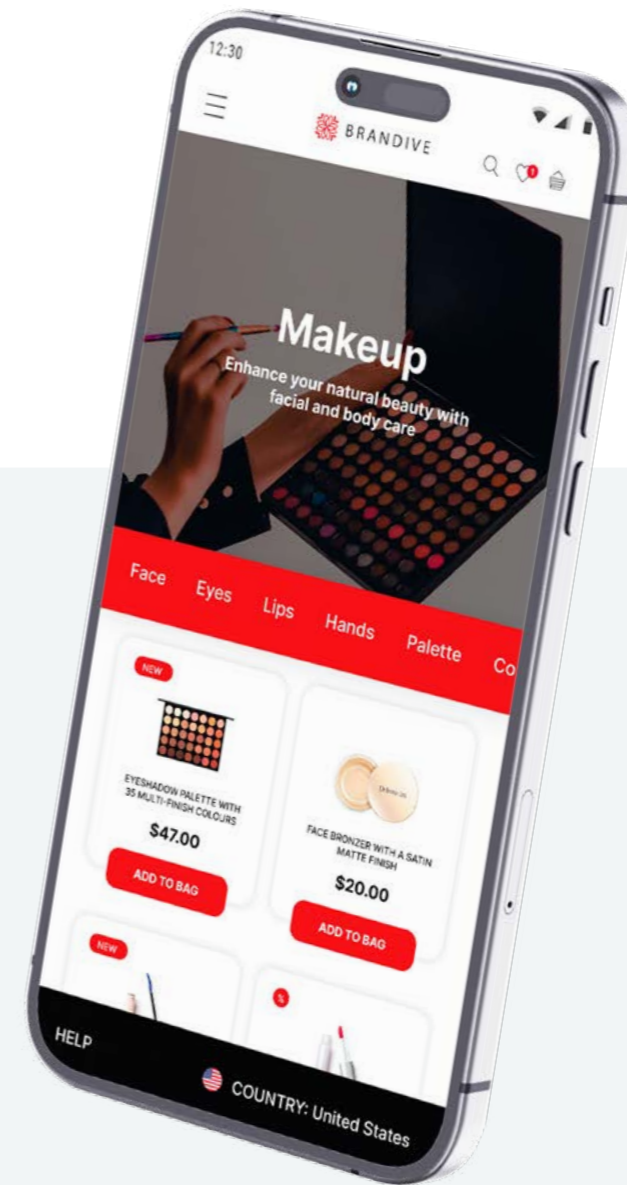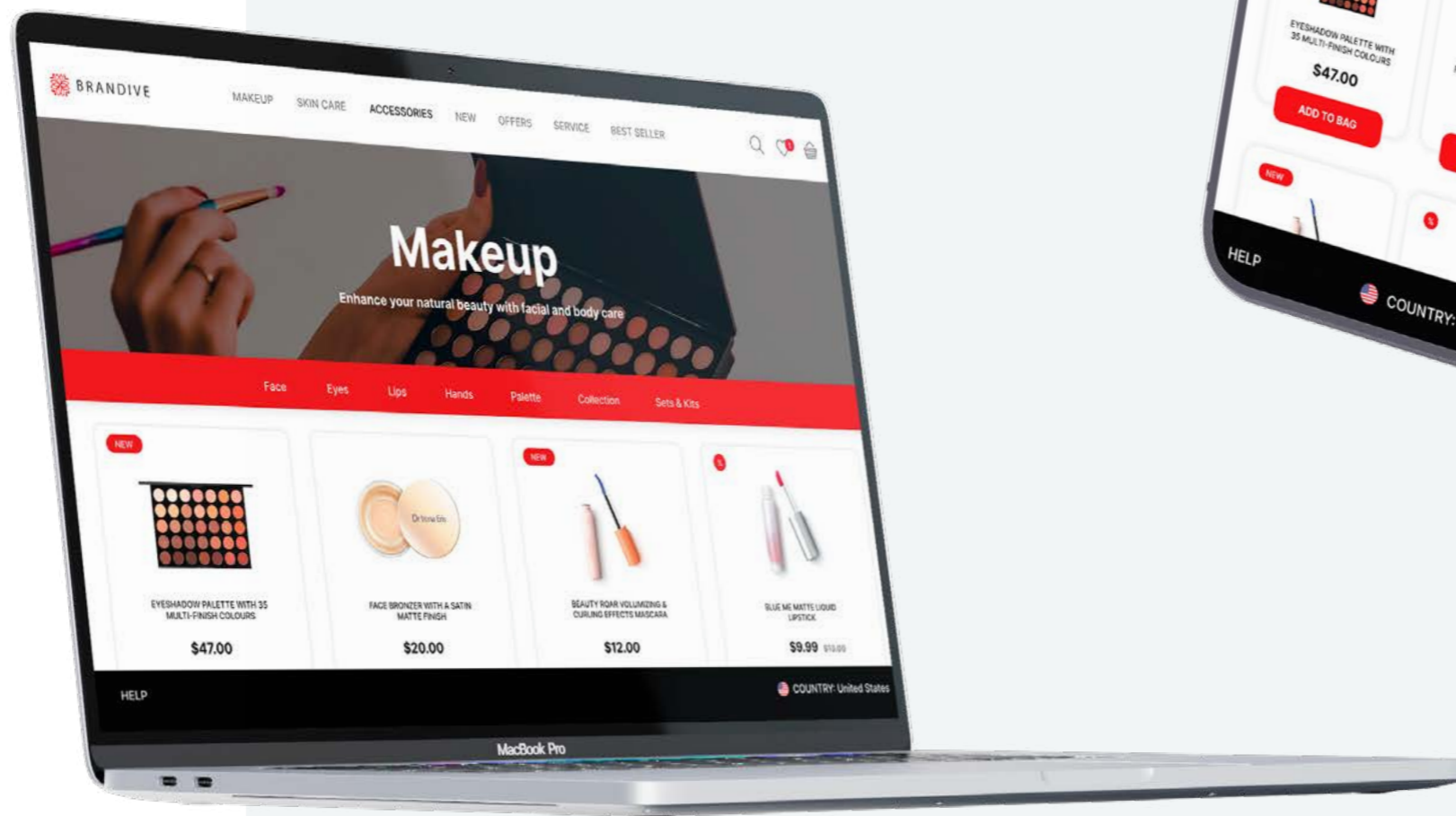**Result:** Online AR Fitting Room

**Phase 6**

**AI Assistant Module**

**Result:** AI virtual assistant

**Evolving the Product:**

**A Detailed Journey of Transformation**

**Phase 1**

Marketplace
Enhancement

New design
for web and
mobile

# Before vs After: Measuring the Impact

**Duration: 6 months**

## Before

**01   Outdated Shopping Experience:**
Legacy design and platform functionality cause friction in the shopping process, resulting in slower orders and potential security concerns.

**02   Performance Challenges:**
Platform struggles to handle peak loads, leading to slow loading times, site crashes, and poor user experience during high-traffic periods.

**03   Inventory Management Issues:**
Inefficient inventory management system leading to frequent stockouts, empty shelves, and missed sales opportunities.

**04   Payment Insecurity:**
Lack of secure payment options and complex checkout processes, resulting in concerns about payment security and potential cart abandonment.

**05   Limited Product Presentation:**
Basic product listings with limited details, make it difficult for shoppers to assess product features and benefits effectively.

## After

**01   Enhanced Shopping Experience:**
Upgraded design and platform functionality for smoother shopping, faster orders, and secure payments.

**02   Optimized Platform Performance:**
Boosted platform performance using advanced cloud technology, ensuring a seamless experience even during high traffic.

**03   Efficient Inventory Management:**
Implemented smart inventory management to keep shelves stocked, reducing empty carts and missed opportunities.

**04   Secure Purchases:**
Protected purchases with secure payment options and simplified checkout processes.

**05   Rich Product Showcasing:**
Showcased products with rich details to help shoppers make confident and informed choices.

# 2 Phase 2
## AI Discovery

**Client Challenge:**

Establishing a large, skilled consultant team for top-tier customer service while balancing quality and efficiency.

**Duration: 2 weeks**

**Solution:**

Leveraging emerging AI technology to develop an AI app to streamline processes, reduce manual labor, and consequently decrease training costs and workload.

**Goal:**

Minimize training costs and human effort while ensuring outstanding customer service. Overcome end users' pain points.

**FYI: What we usually offer businesses in terms of AI:**

» Scientific research and AI consulting service;

» Full-cycle software product development based on AI or end-to-end services for AI solution development;

» Integration of ready-to-use solutions in your existing product features;

» Initial solutions (including AI) improvement;

» User targeting, forecasting, and risk management improvement.

**Alex Shatalov
Tech Lead, Data Scientist &
ML Engineer**

Regardless of business needs, every functional product improvement or scale-up always starts with a profound analysis and discovery phase.

**Here are 5 main questions we usually ask business owners before development:**

— Is AI the right fit for your challenge?

— Do you have enough data, or can you get more?

**Discovery Phase Results:**

Iterative approach: gradually introduce new features and analyze outcomes at each step.

Based on the AI Discovery results and acquired data sets, we moved forward with the CV Module.

— What are your precise goals, and how will you measure success?

— Can we use existing AI solutions instead of building a custom one?

— Do you have the resources, time, and budget required for a successful AI implementation?

⌄ **Iteration 1:** App with Face analysis

⌄ **Iteration 2:** Recommendation system

⌄ **Iteration 3:** AR fitting room

⌄ **Iteration 4:** AI Assistant

# Scaling up with AI: Leveraging Data Insights to Implement the CV Module

## Your Prioritization Strategy

### High Value, Low Complexity Projects

First off, prioritize projects with high business value and low complexity. These projects will likely yield significant benefits with minimal effort for scaling businesses.

### Low Value, Low Complexity Projects

Thoroughly assess the value for projects with low value and low complexity. If the determined value is still deemed sufficient, proceed with the project, considering the availability of necessary data.

By employing a systematic prioritization approach, scaling businesses can make informed decisions about which ML projects to pursue, ensuring their efforts align with strategic goals and maximize the value of their AI investments.

## Benefits of Prioritization:

**01  Focused Effort:** Ensures that resources are allocated to projects with the greatest potential impact.

**02  Risk Management:** Reduces the likelihood of pursuing projects with low value or high implementation risks.

**03  Increased ROI:** Maximizes the return on investment in ML initiatives.

# 3 Phase 3
Computer Vision module

**Goal:**
To develop an application with facial analysis functionality that provides information about the user's skin condition based on a photo.
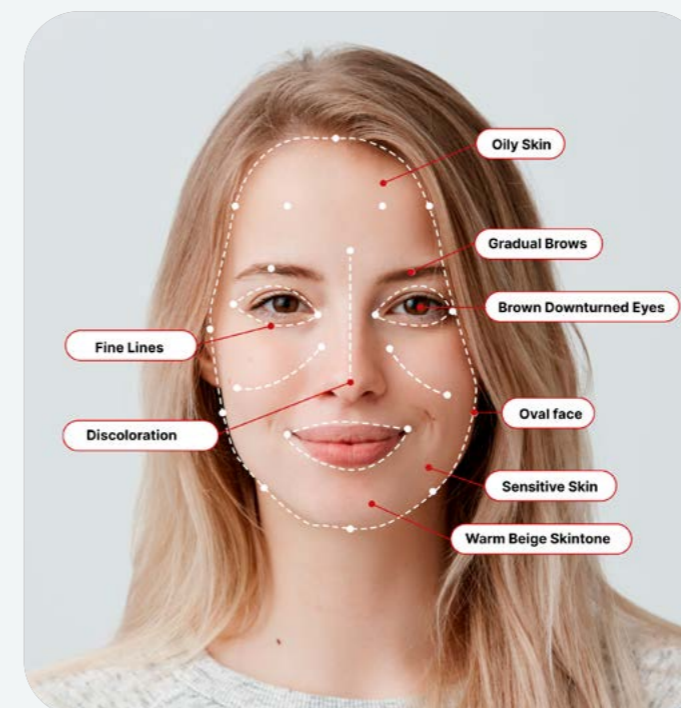


**Instant analysis results include:**

- Eye color
- Age
- Skin type (normal, dry, combination)
- Skin tone (fair, olive, etc.)
- Wrinkles
- Face shape
- Redness
- Breakouts (can be grouped, but they may vary)
- Dark circles under the eyes

## Results:

**01  A user captures or uploads a photo for processing.**

**02  Utilization of a pre-trained machine learning model for in-depth analysis.**

**03  Image processing algorithms evaluate facial key points, texture, color, wrinkles, acne, pigmentation, etc.**

**04  The app generates conclusions based on computer vision data and machine learning findings.**

**05  Instant analysis results are displayed to the user on the application interface.**

Duration: 6 months

**Alex Shatalov**
**Tech Lead, Data Scientist**
**& ML Engineer**

When I consult our clients, I always say:

Machine learning doesn't offer a universal fix for every problem. That's why before diving into AI, let's focus on the business problem you want to solve, not the technology. If a task can be easily solved without AI, let's do so.

If you don't have enough data, please first find ways to gather that data, and then we'll use AI to accelerate the process. For instance, gather information from POS systems, online orders, and customer reviews. This way you can collect data about order volume, service time, product popularity, and customer satisfaction ratings, for more informed decisions.

The personalization of products presented a challenge for our client's business. This involves utilizing AI to provide tailored recommendations and offers based on various data points, including a person's purchase history over a certain period, facial characteristics such as eye color and skin type, and related marketplace product listings.

The next stage of improvement involves the implementation of the Recommendation System Module.

# Further changes:
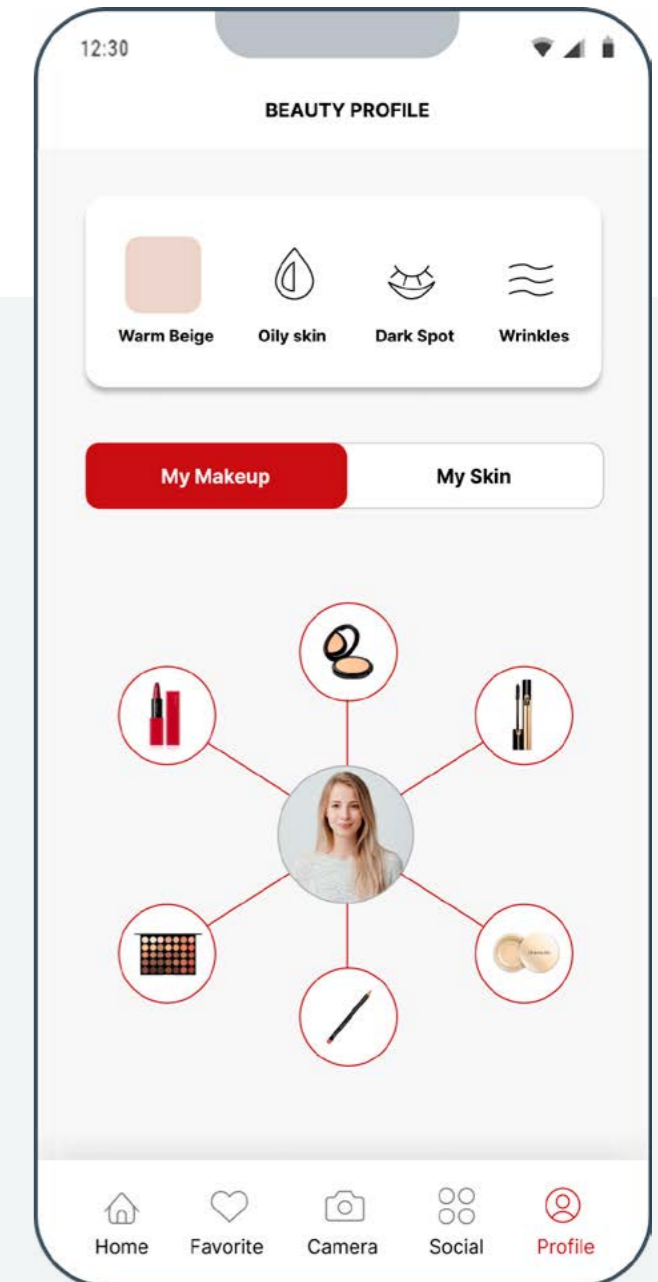# Recommendation System Module

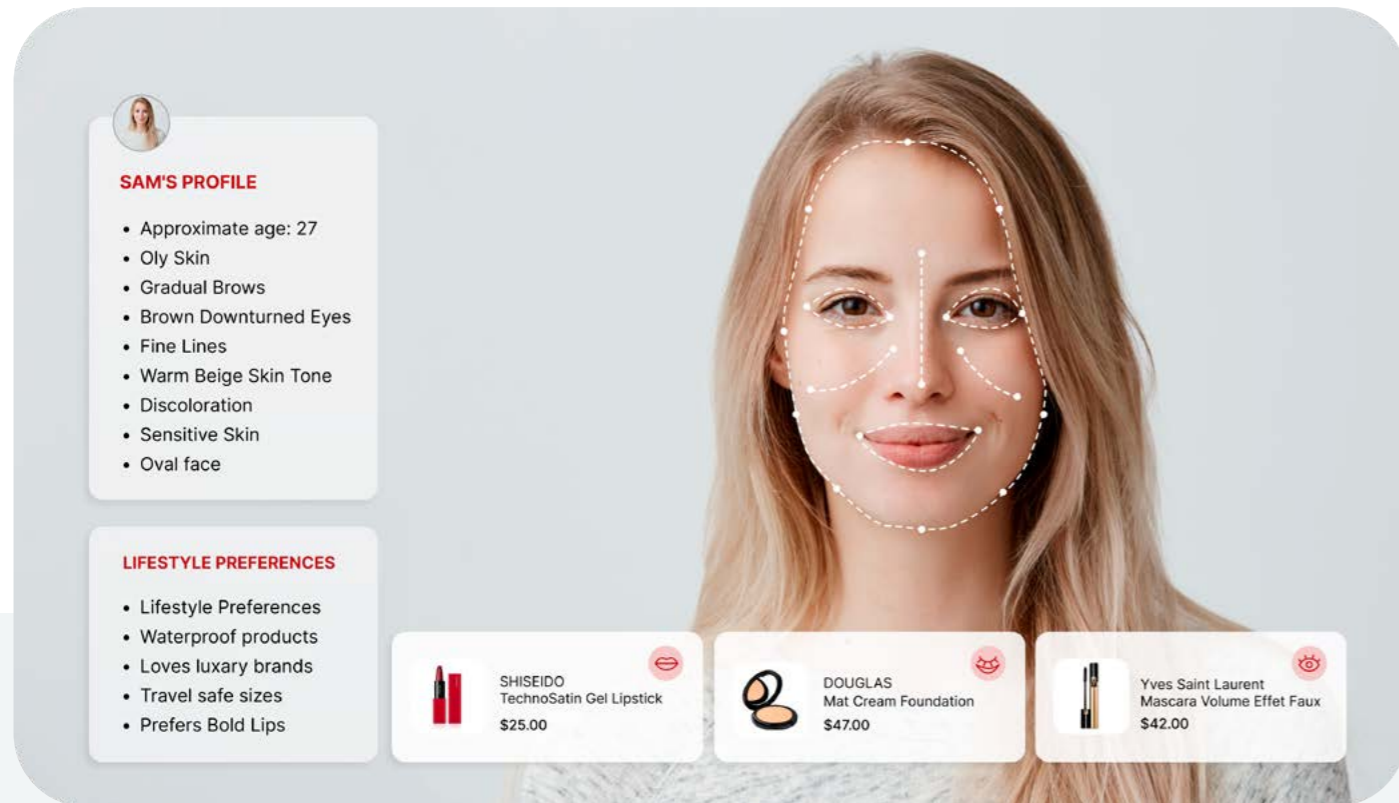## 4 Phase 4
## Recommendation System Module

**Goal:**

To make sure users receive personalized recommendations for skincare products and cosmetics based on the results of their facial analysis.

**Note:**

Ensure the **data** used for training and testing models are **clean, relevant**, and representative of **real-world scenarios.**

**Duration: 4 months**



SAM'S PROFILE

- Approximate age: 27
- Oly Skin
- Gradual Brows
- Brown Downturned Eyes
- Fine Lines
- Warm Beige Skin Tone
- Discoloration
- Sensitive Skin
- Oval face

LIFESTYLE PREFERENCES

- Lifestyle Preferences
- Waterproof products
- Loves luxary brands
- Travel safe sizes
- Prefers Bold Lips

SHISEIDO
TechnoSatin Gel Lipstick
$25.00

DOUGLAS
Mat Cream Foundation
$47.00

Yves Saint Laurent
Mascara Volume Effet Faux
$42.00

**Results:**

We integrated the results of the Facial analysis phase into the recommendation system.

**01** Users access recommendations, possibly inputting preferences.

**02** The recommendation engine considers skin analysis and user preferences (makeup style, event type).

**03** Recommendations matched with a product database containing characteristics and prices.

**04** Generated skincare and cosmetic recommendations displayed.

**05** Users can add products to a cart or wish list from the recommendation interface.

# Virtual Glamor:
# AR Fitting Room Experience

**Ivan Kuzlo**
**Director of Engineering,**
**Mobile Unit**

After successfully implementing personalized recommendations, we addressed another client requirement by introducing an online fitting room, aiming to deliver a luxurious segment-like experience to end-users.

As you're aware, Visual Recognition and Augmented Reality play a pivotal role in enhancing the shopping experience. Leveraging AR technology enables customers to virtually try on products and visualize their appearance before committing to a purchase.

With this accomplishment, we now embark on the next development phase.
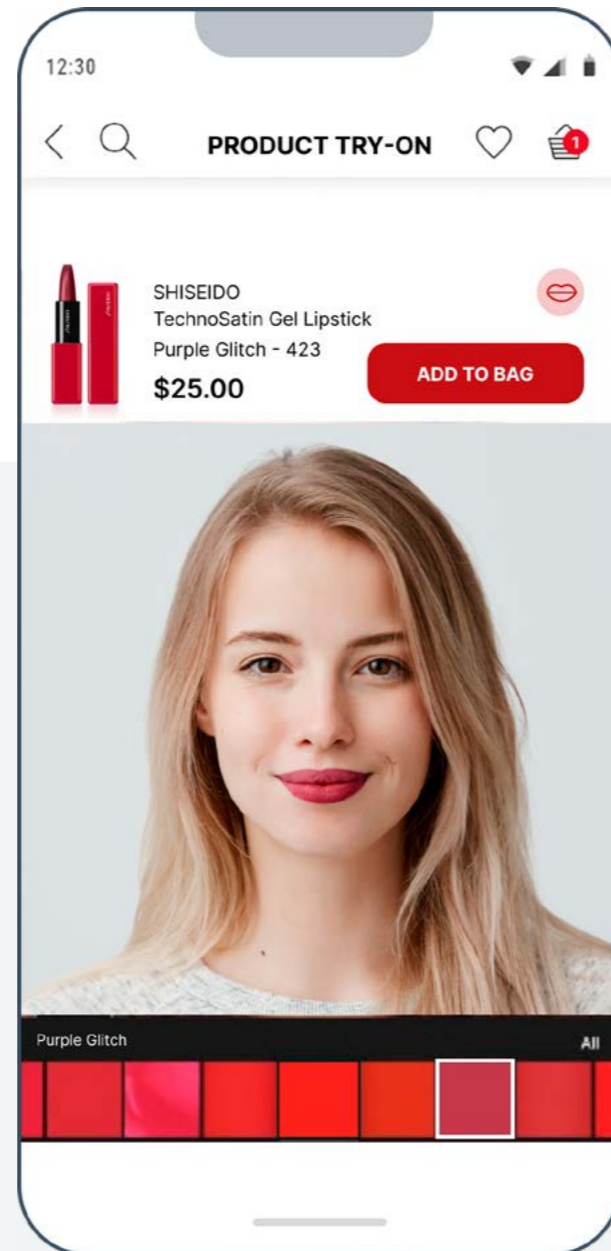
# 5

## Phase 5

AR module.
Online fitting room

**Duration: 6 months**

## Results:

### 01

Introduction of an online «fitting room» for cosmetics, transforming the traditional shopping experience.



**Goal:**

Enable users to effortlessly try on recommended products following the receipt of personalized recommendations.
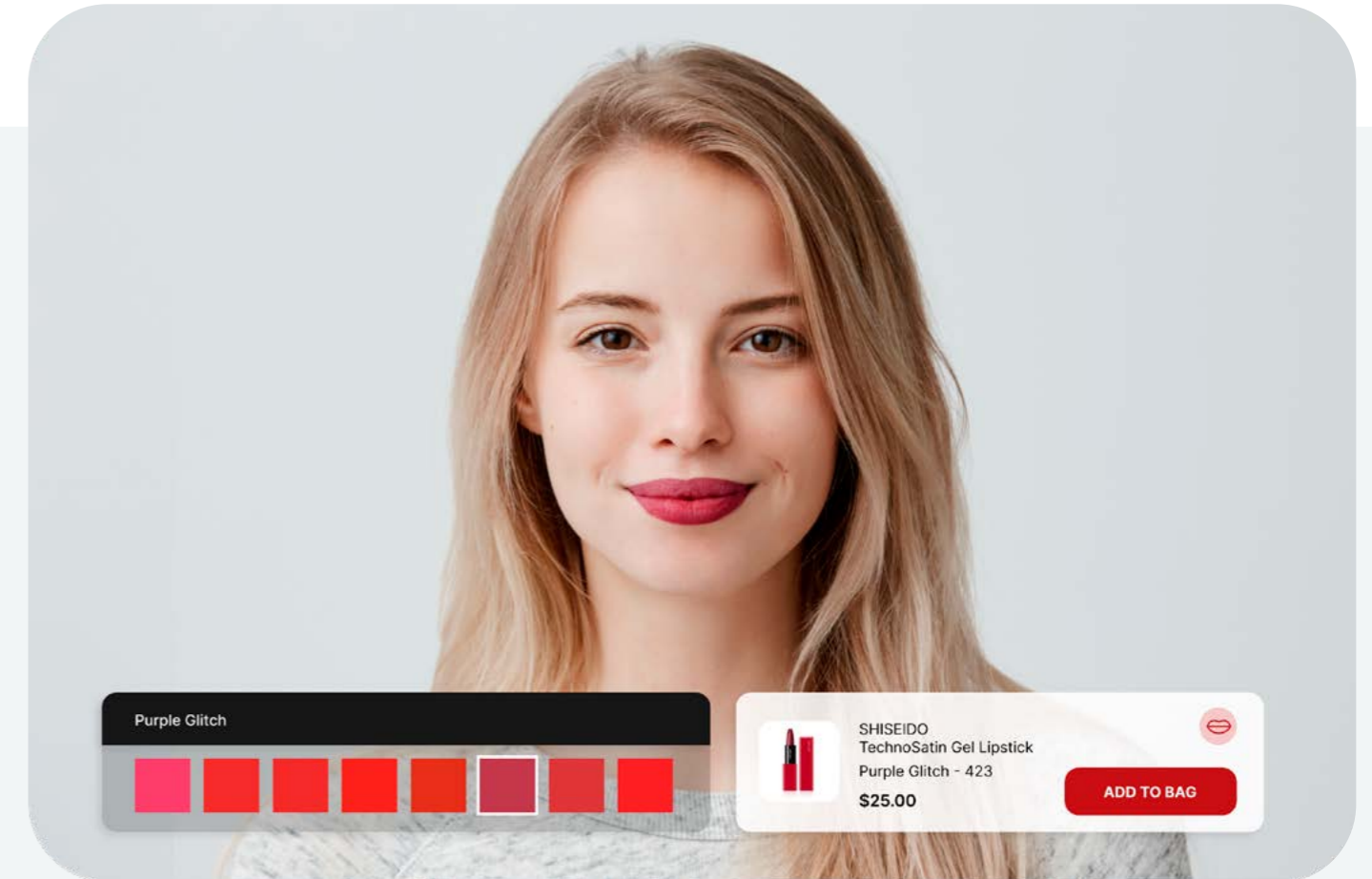


### 02

User-friendly interface enabling exploration of diverse makeup categories like lipsticks, eyeshadows, and foundations.

### 03 Implemented features:

≫ **Virtual Makeup Try-On:** Users experiment on mobile with different shades and styles for desired looks.

≫ Ability to edit and customize media within the app.

≫ Options to capture photos or record videos of different looks.

≫ Save edited images and videos for future use and sharing on social platforms.

≫ **Inventory and Store Locator:** Customers check product availability and receive directions to nearby stores.

**Alex Shatalov**
**Tech Lead, Data Scientist**
**& ML Engineer**

Finally, after the release of the previous phases, we started developing an AI Assistant to improve customer support.

As you're aware, AI Assistants revolutionize customer service through the utilization of AI technology. They provide rapid responses and assist customers with their inquiries and issues in real time, thereby enhancing the overall support experience.

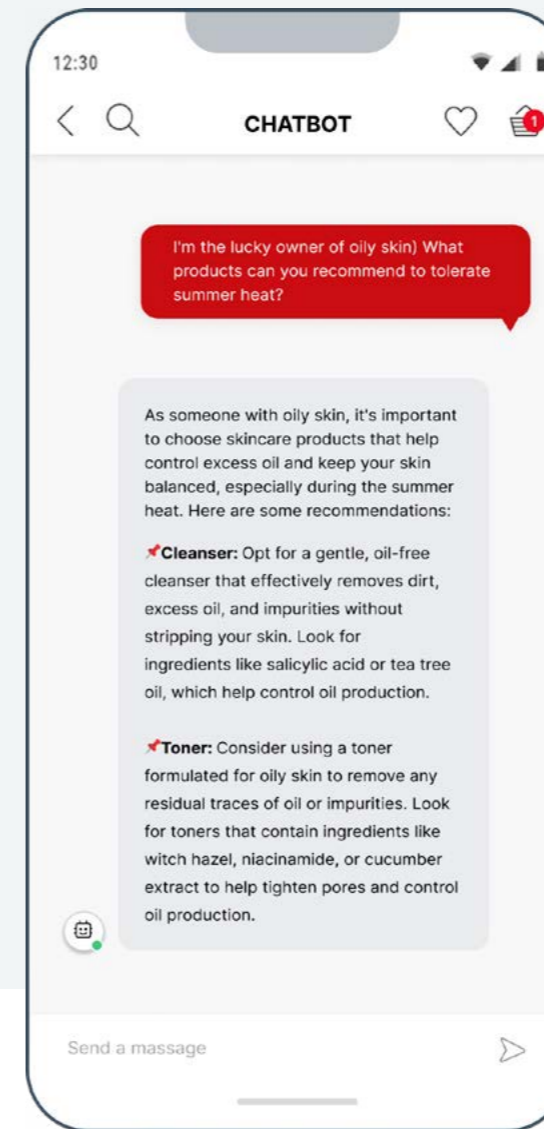Presented below is Phase 6: the AI Assistant module.

# Next-Level Support:
# Harnessing Generative AI

## 6 Phase 6
## AI Assistant module

**Goal:**

Make it easy for users to try on recommended products once they've received personalized suggestions.

**Duration: 2 months**



I'm the lucky owner of oily skin) What products can you recommend to tolerate summer heat?

As someone with oily skin, it's important to choose skincare products that help control excess oil and keep your skin balanced, especially during the summer heat. Here are some recommendations:

✔**Cleanser:** Opt for a gentle, oil-free cleanser that effectively removes dirt, excess oil, and impurities without stripping your skin. Look for ingredients like salicylic acid or tea tree oil, which help control oil production.

✔**Toner:** Consider using a toner formulated for oily skin to remove any residual traces of oil or impurities. Look for toners that contain ingredients like witch hazel, niacinamide, or cucumber extract to help tighten pores and control oil production.

## Implemented Features

» **Makeup Tips and Tutorials:** Share step-by-step tutorials and video demos for specific looks.

» **Skin Care Advice:** Offer guidance on skincare routines and suitable products for different skin types.

» **Product Information:** Detail product ingredients, usage instructions, and customer reviews.

» **Beauty Trends:** Keep users informed about the latest beauty trends, including new launches and styles.

» **FAQs:** Answer common questions about products, shipping, and returns.
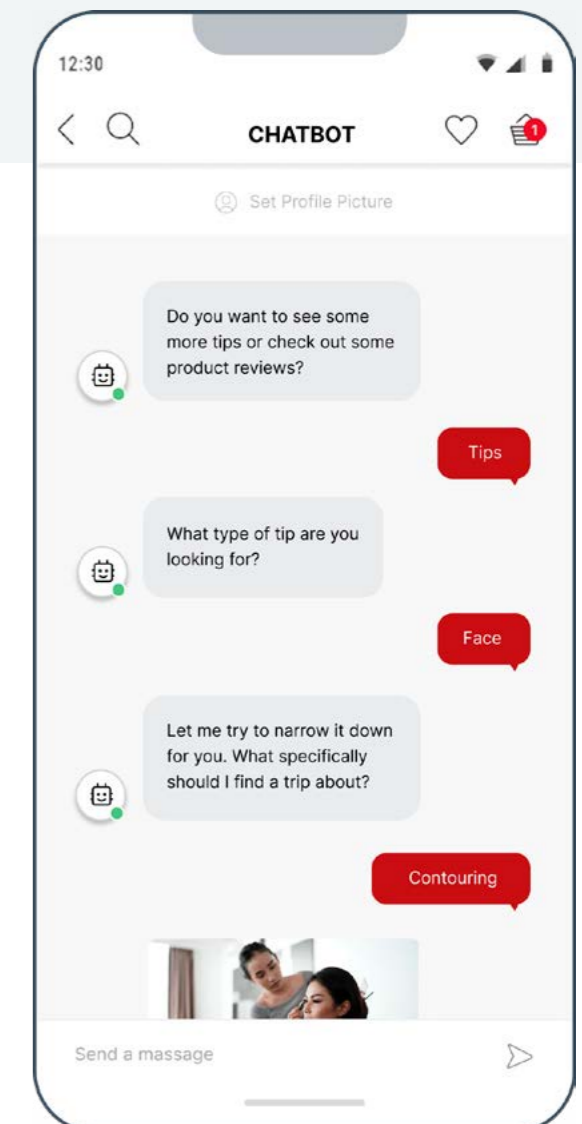
# Results:

## 01

**Improved Customer Engagement:**
The AI Assistant module provides instant, personalized assistance.

## 02

**24/7 Service Availability:**
Round-the-clock support captures sales and support opportunities.

## 03

**Boosted Personalization:**
Tailored product recommendations enhance satisfaction.

## 04

**Efficient Support:**
Streamlined processes allow to focus on complex issues.

## 05

**Boosted Upselling and Cross-selling:**
Intelligent suggestions increase sales opportunities.

## 06

**Multiple Data Insights:**
Gathering customer behavior data refines strategies.

## 07

**Clear Competitive Edge:**
AI Assistant meets growing customer expectations, setting us apart in e-commerce.

# Customer Service Reinvented: The Generative AI Era

**Alex Shatalov**
Tech Lead, Data Scientist & ML Engineer

**FYI.** When it comes to AI Assistant development, there are usually 3 different ways for businesses to proceed, depending on their needs and budget.

**Out-of-box solution: using OpenAI's User API**

- Simple and cost-effective
- No AI specialists are required
- Access pre-trained models effortlessly
- No manual model training is needed

**Some Cons:**
- Limited control over settings and data
- No influence over the model training process
- Unable to upload custom dat

**Fine-tuning OpenAI models - recommended for scaling up businesses**

- Improves accuracy and effectiveness.
- Requires AI specialists.
- Enhances models with custom data.
- Provides greater control.
- Personalized AI Assistants for specific needs.

**Creating from scratch**

- IMost complex and expensive approach.
- Tailored for specific business needs.
- Gather and prepare your data for personalization.
- Complete control over the training process.
- No reliance on third-party APIs, ensuring data confidentiality and infrastructure control.

Now, describing in detail how we changed the initial product with new helpful modules, let's see the real business outcomes of this transformation.

If you have questions about AI Assistant development, check our comprehensive guide or get in touch for personal consultation:

**hello@chisw.com**

# AI-Driven Business Transformation: Scaling Product Performance

**Elena Morozova**
**Chief Project Officer**

Let's scroll back to the business and end user's pain points we mentioned at the beginning of this ebook and see if our implemented solution covered them all. As you can see, we created solutions to meet all prioritized client's business needs.

》 The marketplace improvement phase solved the User Interface challenge.

》 Phases 2, 3, and 4, including AI consulting, CV module, and Recommendation module, removed the lack of personalization

》 AI fitting room suggested a real scale-up in user experience

The AI Assistant phase provided an effective solution to deal with insufficient support.

So now, this all-encompassing AI-driven application aims to enhance the experience of end-users by enabling virtual makeup experimentation. Harnessing the synergies of AI technologies like face recognition, analysis, AI Assistants, and recommendation systems, alongside augmented reality's «try-before-you-buy» feature, users can explore makeup virtually with confidence.

# Conclusions & Takeaways

## 01

There is always room for improvement in popular and in-demand products. Whether you utilize AI, computer vision (CV), augmented reality (AR), or other modern technologies, they can be of great value for scaling up businesses if it is managed smartly and gradually.

## 02

We've exposed a real-life example from the beauty retail industry demonstrating how understanding market and end-user pain points, coupled with strategic use of modern technologies, can help beauty retailers scale up, make more profit, and make their end-users happier.

## 03

There's no one-size-fits-all solution because every business has unique needs. However, there are many common approaches to tackling challenges with modern tech solutions. As an AI development company, we're dedicated to leveraging our practical experience to assist you in finding the perfect solution for your business needs.

## Free Consultation:

Discover How AI Can Enhance Your Product & User Experience

**chisw.com**