

AI4STYLE	Version: 1.0
Vision Document	Date: 26/10/2025
VD-A4S	

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Revision History

Date	Version	Description	Author
<26/10/25>	<1.0>	This version includes the initial overview of the project's vision, outlining the purpose, scope, objectives, and key requirements	All team's members

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Vision (Small Project)

1. Introduction

The purpose of this document is to collect, analyze, and define high-level needs and features of AI4STYLE. It focuses on the capabilities needed by the stakeholders and the target users, and why these needs exist. The details of how our product fulfills these needs are detailed in the use-case and supplementary specifications.

2. Positioning

2.1 Problem Statement

The problem of	Clothing e-commerce spread around the world for remote buying. This is a good phenomenon but still has a drawback that people can not try on clothes to see if it fits them or mix clothing.
affects	Fashion customers.
the impact of which is	Causing waste of money and time when customers have to return unfit clothing.
a successful solution would	<p>Attract more online shoppers with a better shopping experience.</p> <p>Help customers make the right decisions, which in turn saves money and time.</p>

2.2 Product Position Statement

For	Fashion shop owners.
Who	Want to enhance their customers' shopping experience .
AI4STYLE	A fashion e-commerce platform.
That	Integrates AI functionality.
Unlike	Many shopping platforms, such as Shopee or Lazada.
Our product	This platform will have a chatbot for suggesting suitable clothing with the client's preferences. It also provides an online virtual dressroom for clients to try selected clothing on their virtual body image.

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3. Stakeholder and User Descriptions

3.1 Stakeholder Summary

Name	Description	Responsibilities
Project Manager	Manage team to work properly Manage project resources	Ensure tasks are completed on time. Ensure good team communication.
Designer	Design UI for product	Decide how the application look like
Developer	Develop product	Implement features for the application
Business Analyst	Gather requirements from the customers.	Collect requirement Write requirement for the developers
Tester	Test the product for problems, bugs,...	Ensure the application and features are working properly.

3.2 User Summary

Name	Description	Responsibilities	Stakeholder
Fashion shoppers	End-users who purchase clothing through the platform	Browse and purchase clothing. Use the chatbot system for recommendation. Use the virtual try-on feature to visualize how items look when worn. Provide reviews and feedback.	Marketing and User Experience (UX) Team
Shop owners	Businesses or individual retailers	Manage product inventory, listings, offers. Respond to customer inquiries or reviews.	Business Development Manager
Platform admins	System operators responsible for maintaining the platform	Manage user information and accounts. Monitor transactions, site performance, and data security.	Project Manager

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3.3 User Environment

- Most tasks are performed individually. Shoppers browse and purchase items alone, while the shop owners may have small teams managing product inventory, and administration teams handling system maintenance and user support.
- A typical shopping session lasts around 5–30 minutes. Sellers updating inventory weekly takes roughly 30–60 minutes. Administrative monitoring is ongoing but periodic.
- The system is mainly used indoors, on desktop or mobile devices. It must support both stable and mobile network conditions, and display responsively on various screen sizes.
- Only accessible via web browsers on PCs and smartphones. Future platforms may include mobile apps.
- The platform connects with payment gateways, inventory tools, and cloud databases. Future integration with social media login and sharing features is planned.

3.4 Alternatives and Competition

End-users can currently shop on many traditional e-commerce platforms such as Shopee, Lazada, and Tiki, or through global marketplaces like Amazon. Some fashion retailers also operate their own online stores.

Competitors	Strengths	Weaknesses
Shopee / Lazada / Tiki	Large user base, wide product variety, reliable payment systems, and strong brand trust.	Limited personalization, no virtual try-on features, and less emphasis on fashion-specific recommendations.
Amazon	Advanced logistics, strong recommendation algorithms, and global reach.	Limited fashion-focused features, lack of AI-driven try-on experiences, and minimal local market adaptation.
Independent stores	Strong brand identity and collections.	Small-scale, limited AI integration, and low personalization capabilities.

4. Product Features

No.	Feature	Description	Priority
1	Product management	Manage which product is selling, for sale. Shop owners can add a new product or delete an outdated one.	High
2	Chatbot	Suggest available suitable products based on user request	Low
3	Client management	Authentication (SignIn, SignUp, ...) User information, purchase history	Medium

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4	Virtual online dressroom	<p>Users can virtually try on clothes directly on the product page of the selected item and preview their appearance.</p> <p>Users can also try on outfits suggested by the chatbot for a more personalized shopping experience.</p>	Medium
5	Order and payment	<p>For customers:</p> <ul style="list-style-type: none"> • Making order • Pay <p>For the fashion shop owners:</p> <ul style="list-style-type: none"> • Manage order, payment, refund 	Medium

5. Non-Functional Requirements

5.1 Performance Requirements

- Page load time < 5 seconds under normal conditions.
- Support for 100+ concurrent users.
- 90% uptime availability.
- Real-time synchronization between client, chatbot, and backend services.
- Virtual try-on rendering time < 5 seconds for standard images.
- Database queries optimized for response < 500ms.

5.2 Usability Requirements

- Intuitive interface that requires no user training.
- Mobile-responsive design.
- Accessibility compliance (WCAG 2.1 level AA).
- Consistent UI/UX across all modules (product, dressroom, order, etc.).
- Seamless virtual try-on flow with clear instructions and feedback.
- User-friendly dashboard for shop owners (clear product/order management).

5.3 Security Requirements

- HTTPS encryption for all communications
- Secure password hashing (bcrypt)
- Protection against common web vulnerabilities (XSS, CSRF, SQL Injection)
- JWT-based authentication with session timeout
- Role-based access control (RBAC) for admin, shop owner, and customer

5.4 Scalability Requirements

- Horizontal scaling to support future growth in users and products.
- CDN integration for faster global content delivery.
- Efficient caching (Redis or equivalent) for frequently accessed data.
- Database partitioning and indexing for large datasets.

5.5 Quality Requirements

- Comprehensive testing: unit, integration, and UI tests

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- Continuous Integration/Deployment (CI/CD) pipeline enabled
- Automated error logging and performance monitoring
- Regular code review and static analysis enforcement
- User feedback mechanism for usability improvements
- Fault tolerance: system recovers automatically from service failures within 30 seconds

5.6 Environmental & Platform Requirements

- Compatible with major browsers (Chrome, Safari, Edge, Firefox)
- Server environment: Node.js (LTS), Next.js 15, PostgreSQL
- Deployment environment: Cloud-based (Vercel)
- Requires stable internet connection (≥ 5 Mbps for virtual dressroom feature)