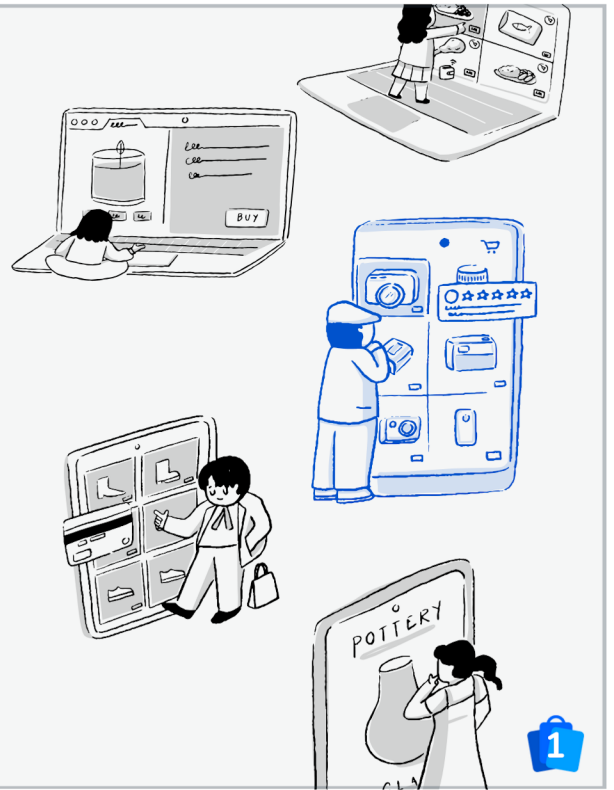




## What is CARTAID?

**CARTAID** - is a Shopping Assistant that utilizes Natural Language Processing (NLP) technology to interpret user queries for products and gifts. Users interact through a chat-style interface to communicate their shopping requirements. **CARTAID** seamlessly integrates with the Amazon API, providing real-time product recommendations based on user inquiries.





## OUR TEAM



**Serhii Shchoholiev**  
Architect



**Mykhailo Bilodid**  
Business Analyst



**Polina Pavlenko**  
Scrum master, Designer

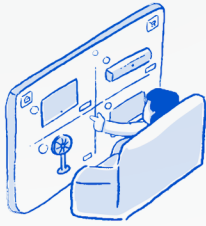


**Mykyta Dubovyi**  
Mobile Dev





## OUR TEAM



**Stanislav Molchan**  
QA



**Andrii Syrotenko**  
Back End



**Taras Bondarenko**  
Front End



**Danylo Nazarko**  
Back End





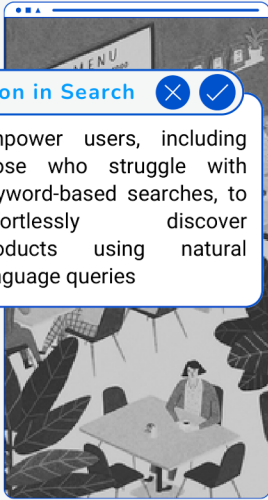
# RELEVANT BENEFITS



## Precision in Search



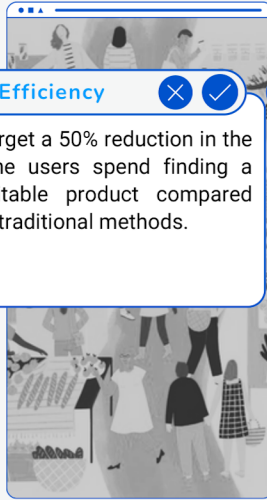
Empower users, including those who struggle with keyword-based searches, to effortlessly discover products using natural language queries



## User Efficiency



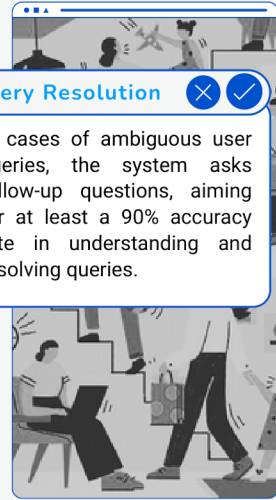
Target a 50% reduction in the time users spend finding a suitable product compared to traditional methods.



## Adaptive Query Resolution




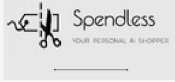


In cases of ambiguous user queries, the system asks follow-up questions, aiming for at least a 90% accuracy rate in understanding and resolving queries.



## MARKET RESEARCH



NAME	 Shop.App AI	 Shop Guru	 Buysmart.ai	 Spendless
AI Shopping Assistant	★		★	★
In-App Shopping	★		★	
Personalized Recommendations	★	★	★	
Chrome Extension		★		
ChatGPT Plugin				★
Specialized in Amazon		★		★
Chat-like interaction	★	★	★	★





## IMPLEMENTATION & TECHNOLOGIES

### Back-end:

- .NET C#
- MongoDB
- GraphQL
- Unit/Integration Tests

**Web Client** - Blazor C#

**Web Admin** - Angular

**Mobile (iOS + Android)** - Flutter

### External API:

- OpenAI
- Amazon

**Version control** - git + Github

**Dev tools** - VS Code + Devcontainers

### Deployment:

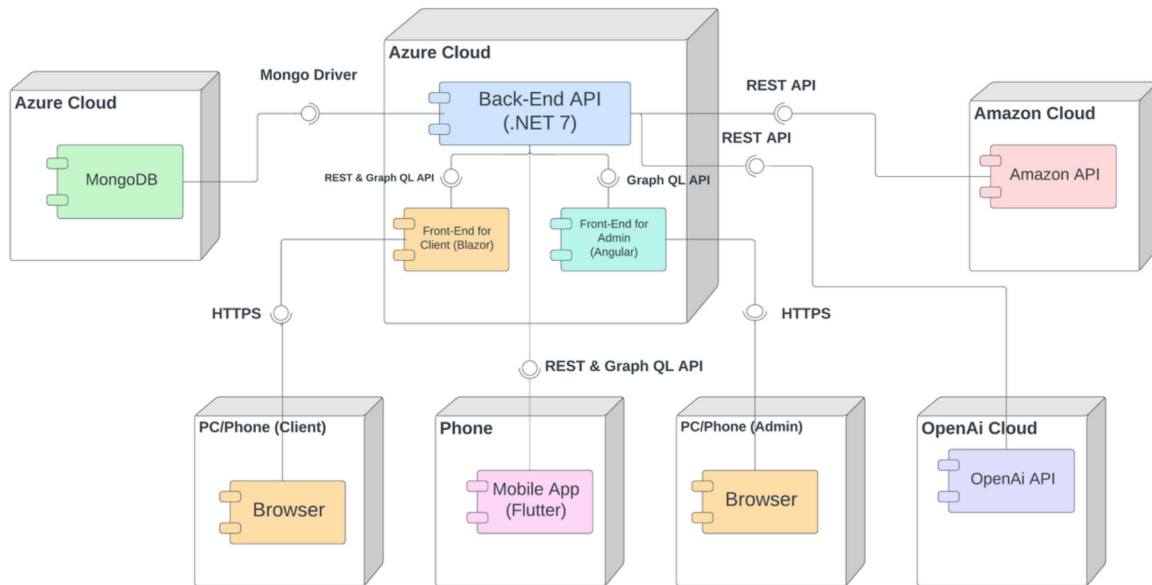
- Azure + CI/CD via GitHub Actions

**Management** - Jira





# DEPLOYMENT DIAGRAM





SA - Sprint 5: Development 2 10 Dec – 24 Dec (17 issues)

5

2

10

Complete sprint

...

SA-224 Create Screenshots for ...	MVP	DONE	
SA-130 Test Products search...	MVP	IN PROGRESS	
SA-224 Test Products Search in ...	MVP	TO DO	
SA-199 Product search does not...	MVP	DONE	
SA-219 Create Google Play Dev...	MVP	DONE	
SA-239 Suggestions are returne...	MVP	DONE	
SA-222 Back button does not w...	MVP	DONE	
SA-216 Add coming soon hover...	MVP	DONE	
SA-223 Remove user name and ...	MVP	IN PROGRESS	
SA-217 Add confirmation befor...	MVP	TO DO	
SA-129 Add login page for Web...	MVP	TO DO	
SA-225 Deploy mobile app to T...	MVP	DONE	
SA-226 Deploy mobile app to b...	MVP	DONE	
SA-227 Suggestions are not sen...	MVP	DONE	
SA-228 Create Screenshots for ...	MVP	DONE	
SA-229 Add account deletio...	MVP	TO DO	
SA-240 SSE events sent as clust...	MVP	TO DO	



## SCRUM MANAGEMENT

The main idea of our product team is for a group of specialists to work as a single organism aimed at achieving product goals and responding to customer or user needs.





# ESTIMATIONS



Our team used Agile Poker as it provided an effective and collaborative approach to estimating the complexity of tasks during our Sprint Planning sessions.

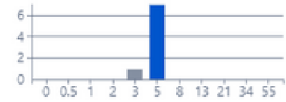


Create ApiClient service

5

SA-147

Participants

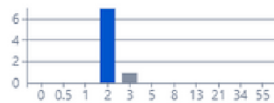


Add Products selection to Mobile App

2

SA-178

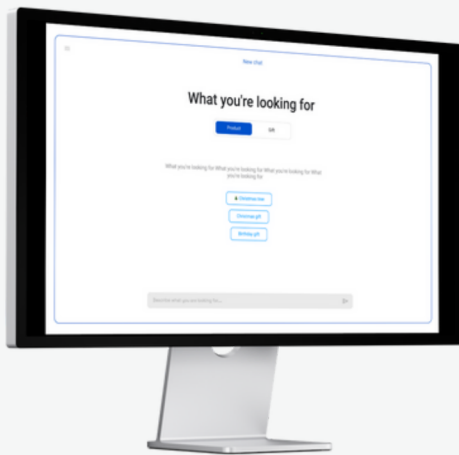
Participants





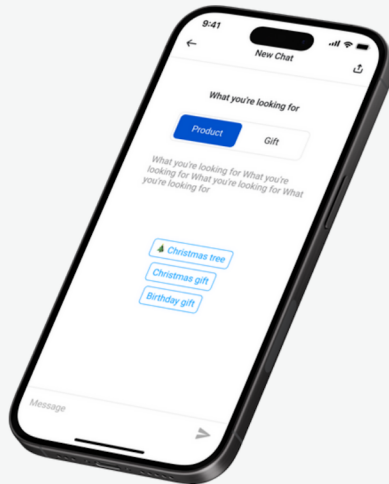
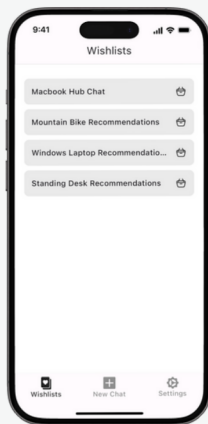
# INTERFACE

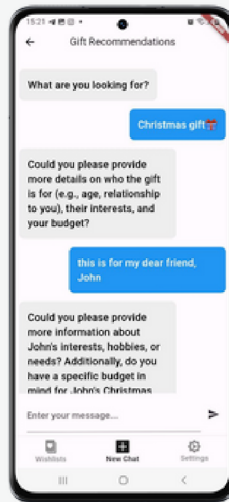






## CARTAIID IOS APP







## PROJECT READINESS



The project creation process was divided into major components:

- Web Api
- Client Web App
- Admin Web App
- IOS/Android App
- Web/Mobile App Design

These components collectively form the foundation of our project, bringing together the power of a comprehensive web API, a feature-rich client web app, and a mobile-friendly iOS app.



### DESIGN

The design for the project was fully completed



### API

Most of the tasks were fully accomplished, but Amazon API access still hasn't been granted.



### CLIENT WEB APP

All major features were completed



### ADMIN WEB APP

All tasks were fully accomplished

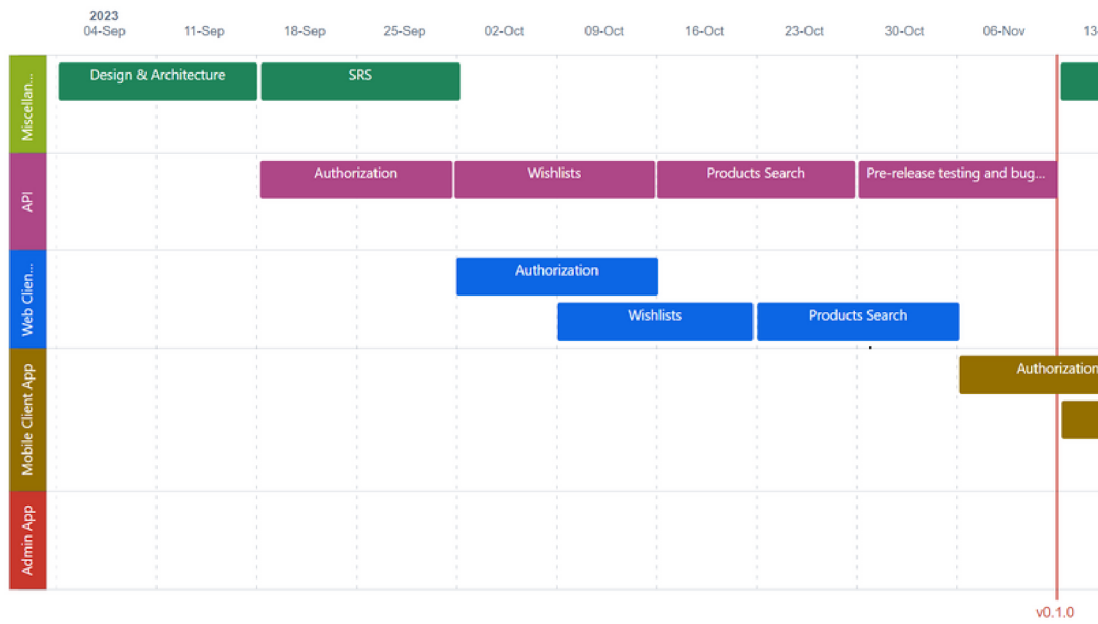


### ANDROID/IOS APP

Most of the functionality is done.



## ROADMAP





## ROADMAP



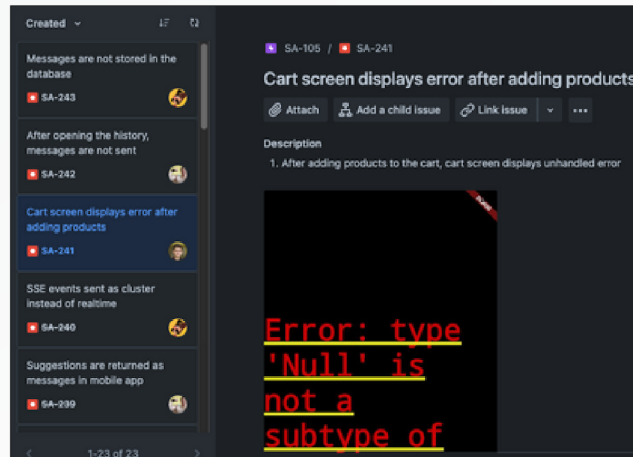


## BUG FIXES



We came across **23 bugs** while developing, mostly dealing with API and frontend issues.

Fixing these problems not only helped us sort out technical issues but also made our final product better, providing a smoother user experience.





## TESTING



SA-105 / SA-224

### Test Products Search in Mobile App

Attach Add a child issue Link issue ...

Description

Acceptance criteria

1. Verify access (Guest login)
2. Verify wishlist creation
3. Verify message sending
4. Verify suggestions for question answers
5. Verify wishlist name creation
6. Verify products in shopping cart
7. Verify wishlists list in menu

Test Explorer

Test run finished: 65 Tests (65 Passed, 0 Failed, 0 Skipped) run in 19,5 sec

Test	Duration	Traits
ShoppingAssistantApi.Tests (61)	18,6 sec	
ShoppingAssistantApi.Tests.Tests (61)	18,6 sec	
AccessTests (12)	727 ms	
ProductsTests (2)	10,8 sec	
RolesTests (4)	4 sec	
UsersTests (10)	840 ms	
WishlistsTests (33)	2,2 sec	
ShoppingAssistantApi.UnitTests (4)	157 ms	
ShoppingAssistantApi.Tests.Tests (3)	84 ms	
ProductTests (3)	84 ms	
ShoppingAssistantApi.UnitTests (1)	73 ms	
OpenAiServiceTests (1)	73 ms	



We wrote **61 Integration Tests** and **4 Unit Tests** to ensure that separate pieces and system as a whole works as expected.



## VERSION CONTROL SYSTEMS

Git was used as the version control system. The repositories were kept on Github.



Web Client



API



Mobile Client

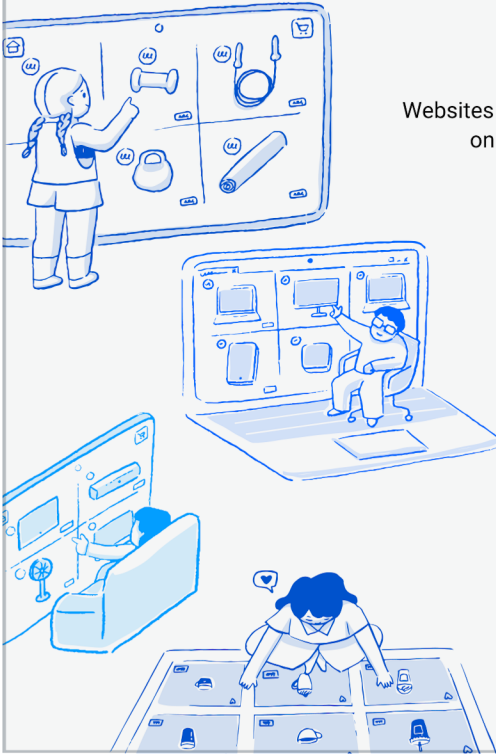


Web Admin

## HOSTING



Websites were deployed on Microsoft hosting, namely Azure. CI/CD pipelines were set up on the master branches for production and on the development branches for devs.



CARTAID WEB



CARTAID WEB  
ADMIN



## CONCLUSIONS

- Clear goals and objectives guiding the project direction.
- Effective communication channels for seamless information sharing.
- Allocated roles and responsibilities based on strengths and expertise.
- Collaborative planning and decision-making processes.
- Comprehensive project timeline with specific milestones and deadlines.
- Positive team environment fostering effective teamwork and skill utilization.

