Jisp Mobile app

About

WaveAccess is a results focused software development company that provides high quality software outsourcing services to hundreds of emerging and established companies globally. We use our technical expertise to increase business efficiencies, optimize slow or unreliable systems, recover projects that have gone off track and bring ambitious ideas to life.

21
years of delivering successful outcomes for customers

600+
talented and passionate professionals in 4 countries

4
global R&D centers and almost any technology

20+
Machine Learning projects

300+
successful projects delivered and counting

96%
customer satisfaction index

Awards and Recognitions

Gold
Microsoft Partner
■ Microsoft

Microsoft Partner
■ Microsoft

2019 Partner of the Year
Media & Communications
2018 Partner of the Year
Artificial Intelligence Award
2017 Partner of the Year
Business Analytics Award

Microsoft
Partner Network
WORLDWIDE
DYNAMICS PARTNER
OF THE YEAR
2009, 2010, 2011, 2016, 2019

IBM
Registered
Business Partner

Quality Management
DQP
ISO 9001:2015

GDPR

Informations Management
DQS
ISO/IEC 27000

SCI·TECH AWARDS
(ACADEMY OF MOTION PICTURE
ARTS AND SCIENCES)

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The first personal shopper to combine online and offline shopping in a single package. It works in Great Britain, where agreements are drawn up with stores and shopping malls to install Jisp Pay terminals and iBeacon-based beacons.

PRIMARY FUNCTIONALITY

For users:

- track purchasing activity offline
- track online shopping
- aggregate products, discounts, and special offers that have caught the user's interest into a single system
- goods can be purchased without cards or cash using the Jisp Pay system
- cash back for purchases
- personalized advertising that displays special offers for interesting product categories from nearby stores
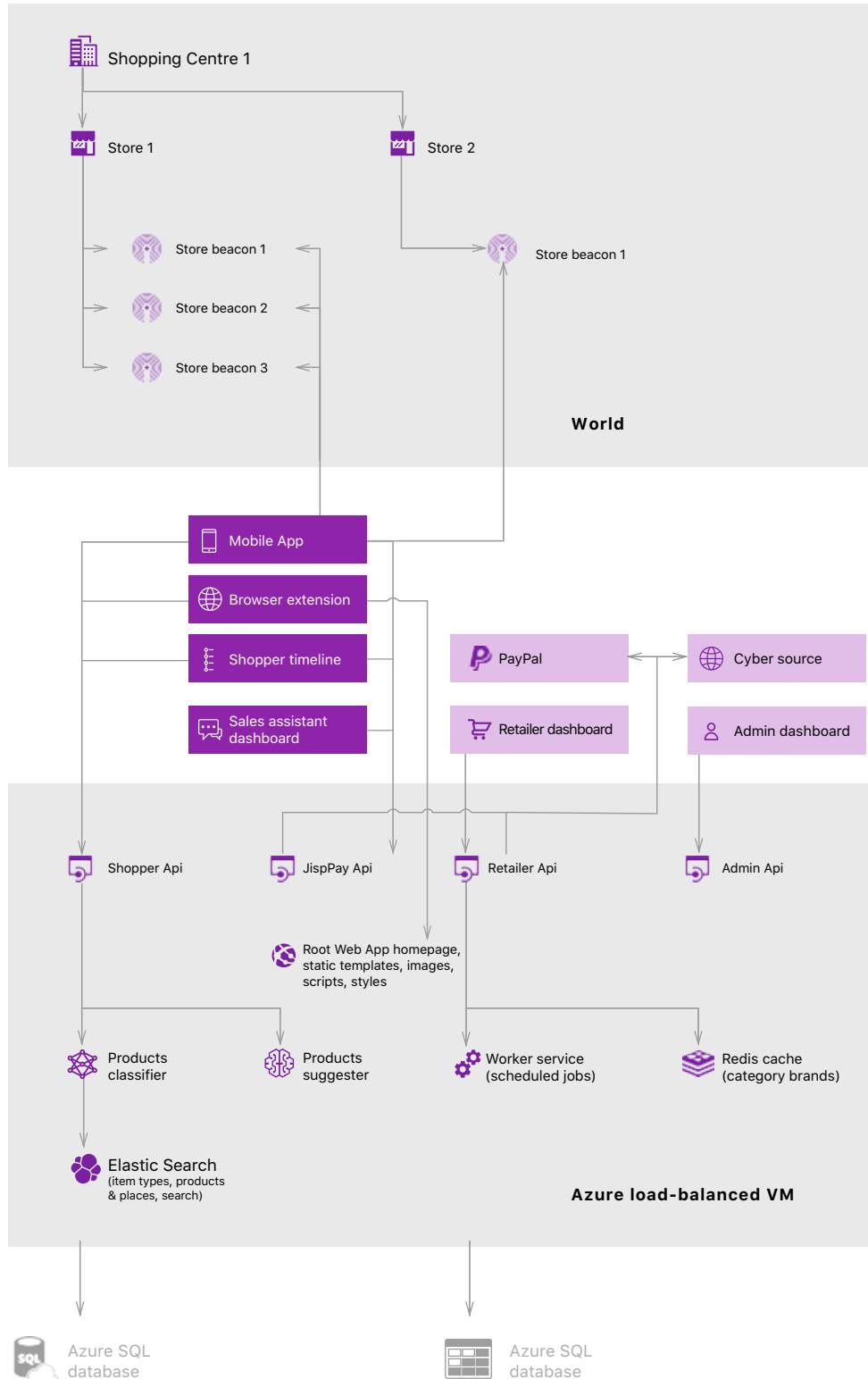
For stores:

- goods are loaded into the system automatically
- targeted notifications are sent to customers who pass by or enter the store
- compare your store's product offers with customers' desires and send them targeted offers
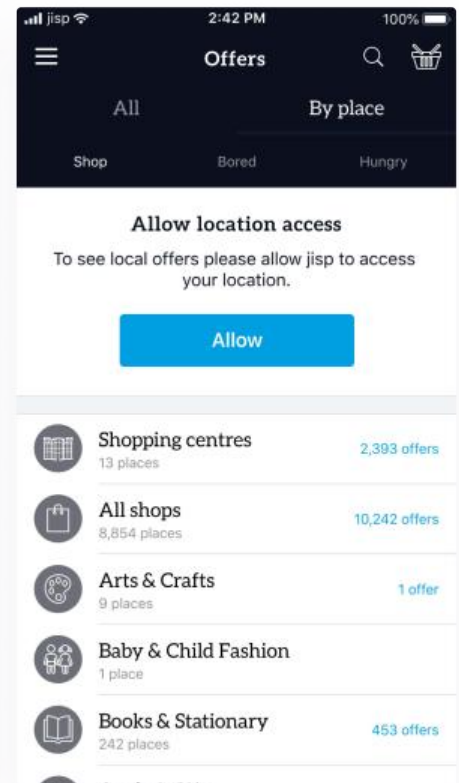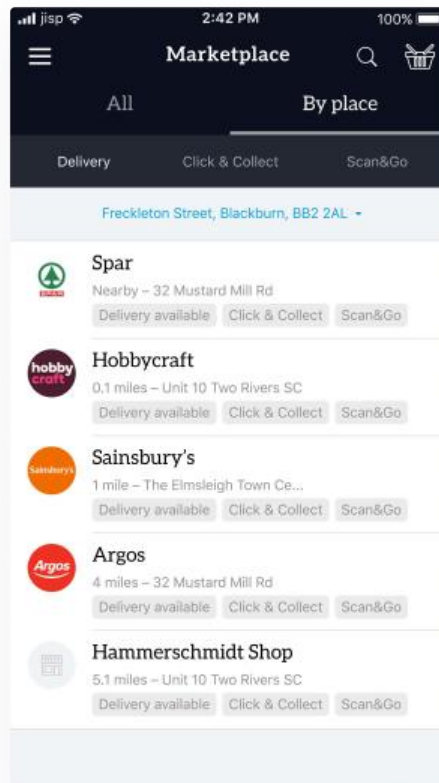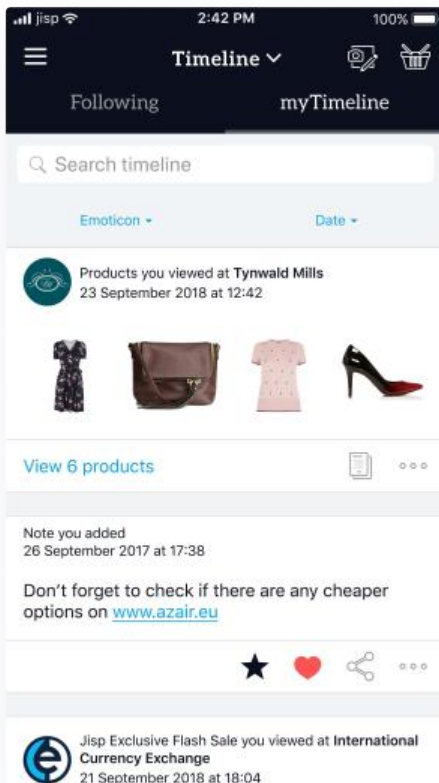
Follow the customer's journey, online and offline

Jisp consists of a mobile app, a browser extension, and a net of iBeacons. So it collects user's online search history, captures customer's behaviour within shopping centers, and offers deals. Saved data about customer's behavior is available to retailers via their Dashboard.

jisp® Solution architecture scheme

Shopping Centre 1

- Store 1
- Store 2

Store 1:
- Store beacon 1
- Store beacon 2
- Store beacon 3

Store 2:
- Store beacon 1

World

- Mobile App
- Browser extension
- Shopper timeline
- Sales assistant dashboard

- PayPal ⇄ Cyber source
- Retailer dashboard
- Admin dashboard

- Shopper Api
- JispPay Api
- Retailer Api
- Admin Api

Root Web App homepage, static templates, images, scripts, styles

- Products classifier
- Products suggester
- Worker service (scheduled jobs)
- Redis cache (category brands)

Elastic Search (item types, products & places, search)

Azure load-balanced VM

- Azure SQL database
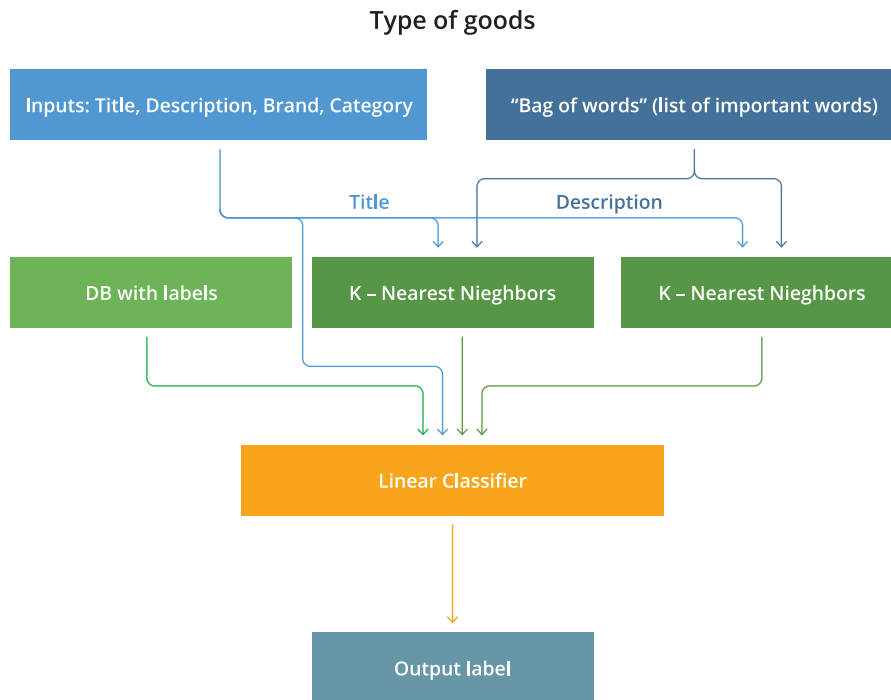- Azure SQL database

WaveAccess
We Make IT Easy

By using machine-learning algorithms, we have been able to automate two resource-intensive processes:

Determining product type

Information about the product (name, description, brand, category) is loaded into the system, where it is processed by a machine-learning algorithm in tandem with a database of in-stock products. The processed information is sent to a classification system that automatically determines the type and category of the product.

The system is self-learning and therefore factors in changes in users' preferences and reduces the system's overall error percentage.

Type of goods

| Inputs: Title, Description, Brand, Category | "Bag of words" (list of important words) |

Title — Description

DB with labels — K – Nearest Nieghbors — K – Nearest Nieghbors

Linear Classifier

Output label

User recommendations

The recommendation system for users has two branches. One uses information provided by the user about themselves, and the other uses the user's history.

For customers who make repeat purchases at a store, the recommendations are determined according to the following model:

Information about purchases, behavior on the website, and all product categories from the website are processed by an algorithm based on decision-making trees. As a result of the system's activity, a list of products that may be of interest to the user is obtained. This list and information about the user that has also been processed by the machine-learning algorithm are combined in a ranking algorithm, and the website user sees a personalized list of products that might interest them.

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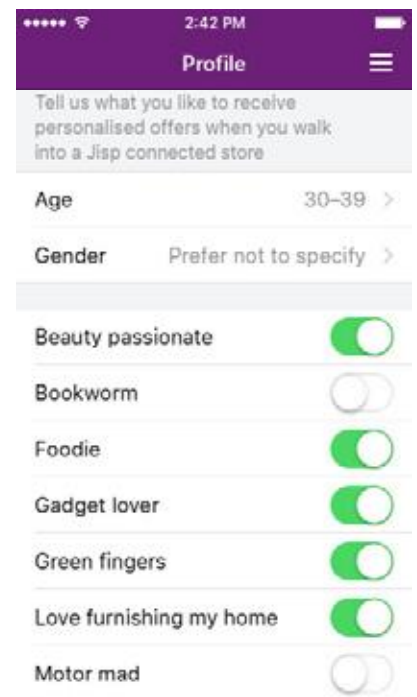
In the event that a user does not provide personal information, only their history is used. If the system does not have data about the user and the user has too short a history, the most popular items are suggested until the system can adapt.

Recommendations

```
┌────────────────────┐  ┌────────────────┐  ┌────────────────┐  ┌────────────────────┐
│ DB with user info  │  │                │  │                │  │     Products       │
│ and their          │  │ New user info  │  │ User history   │  │ separated to       │
│ preferences,       │  │                │  │                │  │ categories         │
│ separated to       │  │                │  │                │  │                    │
│ categories         │  │                │  │                │  │                    │
└────────────────────┘  └────────────────┘  └────────────────┘  └────────────────────┘

        ┌──────────────────────┐              ┌──────────────────────┐
        │   Decision Tree      │              │   Decision Tree      │
        │   based algorithm    │              │   based algorithm    │
        └──────────────────────┘              └──────────────────────┘

        ┌──────────────────────┐              ┌──────────────────────┐
        │ Most likely user     │              │ Most likely user     │
        │ category that the new│              │ category that the    │
        │ user can be assigned │              │ user might be        │
        │ to                   │              │ interested in        │
        └──────────────────────┘              └──────────────────────┘

                        ┌──────────────────────┐
                        │ K – Nearest Nieghbors│
                        └──────────────────────┘

                        ┌──────────────────────┐
                        │ Runked list of       │
                        │ suggestion products  │
                        └──────────────────────┘
```

Result

Machine-learning algorithms process a constantly-updated database of thousands of products, automatically sorting them into categories and sub-categories.

Every customer receives a personalized list of products and special offers from nearby stores based on the data they have provided.

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If you need to develop
a similar project,
please write us
hello@wave-access.com