

SCENT RECOGNITION MOBILE APP FOR NANOSCENT



OBJECTIVE

Develop a client-server cross-platform mobile app to recognize different statuses and parameters of babies' diapers and provide recommendations to users based on the machine learning algorithms.

CHALLENGE

NanoScent Ltd. is an award-winning Israel based company specialized in scent recognition with the help of hardware and ML. The mission of NanoScent is adding scent identifying and analyzing tools to our everyday life via smell recognizing applications. Our Client covers domains from Wellbeing to Industry 4.0.

The Client came to Intetics with the challenge of creating a mobile application from scratch for iOS and Android platforms with an intuitive user interface. Intetics was chosen as an experienced software provider of B2C applications with the most appealing UI along with enterprise-grade mobile solutions that automate business processes.

SOLUTION

From the very project start, the Intetics team received a number of prototypes from the Client. After analyzing the requirements to the future application, our experienced team created the use-cases based on these prototypes and suggested the best implementation of the Client's innovative idea.

The core idea of the project included creating a mobile application to manage scent recognition device. Basic functionality was the following:

- parent registration,
- adding children's profiles to the app,
- keeping records about children feeding and health.

As the project developed, our back-end and React Native engineers worked hand-in-hand to specify details and build client-server architecture.

The biggest challenge to the Intetics team was related to UX and UI. The whole process of mobile application development was supplemented by high-quality designer's consultation to provide better user-experience to the customers. We had several sessions together with the Client to make the UI intuitive. Additionally, our team conducted the testing of the developed

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interface on the real users to get the feedback and identify the pain points of the system.

The second challenge was related to the distinctive feature of the application – scent recognition of the diaper and its remote testing with the hardware. The Intetics team suggested the specific approach to test it remotely: with the developed mobile application, the customer can start the analysis after putting a diaper into the special hardware. Then the hardware analyzed the poo scent and created its footprint. The app provided short feedback to the user and saves the footprint to the server. The scent footprint could be analyzed with a machine learning algorithm to identify its components. Scent analysis helps identify possible deviations from the norm.

The Intetics's team had a clear understanding of the Client's business need and implemented the top-class technology approach to make the application more innovative:

- AWS as reliable and scalable cloud computing services;
- React Native as a framework, that offers faster cross-platform mobile development and efficient code sharing without sacrificing app quality;
- Using REST API as a software architectural approach to define the constraints for creating Web services.

The Intetics's team included mobile and back-end developers, UI/UX designer, quality assurance engineer and a project manager. To better organize the workflow, we implemented a fix-price Agile as one of the approaches to the software development process.

Maintaining high-level interpersonal relationships with the Client helped the Intetics team to implement the most innovative features, successfully overcome challenges and, as a result, build a user-friendly

wellbeing mobile application.

Technology stack

- AWS cloud,
- React Native,
- Python (Flask),
- REST API,
- JavaScript,
- MySQL.

RESULTS

Working with Intetics, NanoScent received a mobile application built from scratch in the condition of tight timeframes and changeable requirements. The application is suitable both for iOS and Android platforms. The developed user interface simplifies interactions and offers unique customer experience.

Cooperative work with Intetics brought into the world the unique mobile app, that revolutionized the Wellbeing industry approach to the children raising process. Using this innovative application, the company expanded its market angle and increased customers flow.