

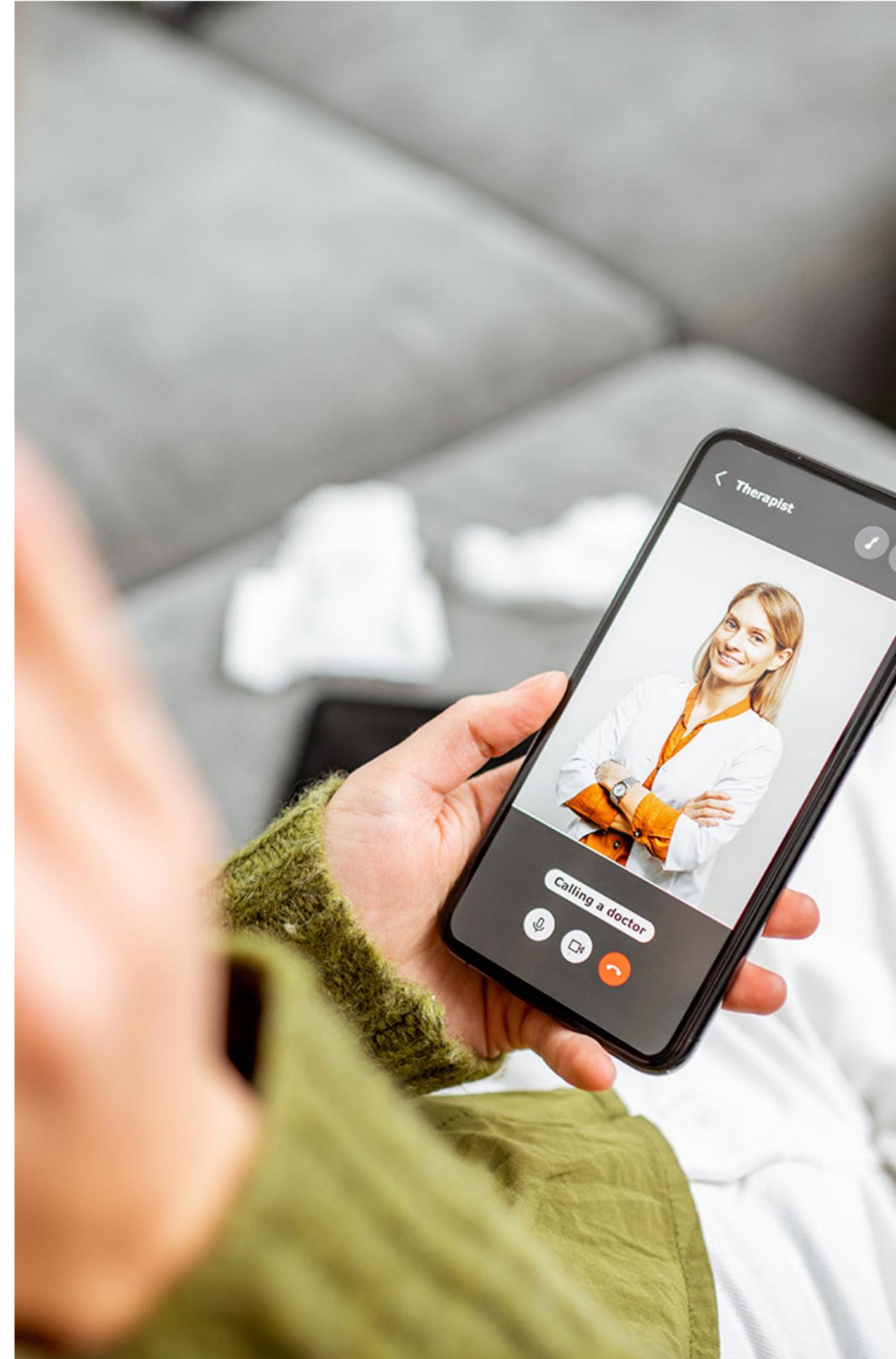
Case Study

AltexSoft Assists Client in Creating Telemedicine App

Swift (for iOS) and Symphony (for backend), Firebase (for application development), Infermedica API (for symptom checking), PubNub (for messaging), Twilio, VOIP, and CallKit (for video calls).

Background

The client reached out to AltexSoft to build a custom, role-based diagnostic app that would allow users to fill in a survey about their symptoms and then connect with a relevant healthcare professional who would help them with further treatment. The product development started on the ground of a client's proof-of-concept (PoC) prototype of the app. The AltexSoft team's task was to build a working product based on this prototype.



Challenges

Our goal was to create an application with multiple user roles, a rich feature set, and a user-friendly design. Key roles in the app were Patient and Expert. A Patient can be advised about a likely diagnosis, track an illness, and get consultations from an Expert via text or video chat. An Expert can add various app content pieces such as articles on well-being and healthcare. Also, a Patient can leave comments and participate in discussions with other patients. The product is currently in the MVP stage with payment feature implementation in progress.

Within the scope of the project, our team had to address the following challenges:

1.

Implement symptom checking functionality

2.

Provide in-app messaging

3.

Enable face-to-face communication

Value Delivered

1. Integration with a symptom checker

The key feature of this app is to assess and diagnose possible conditions based on a user's symptoms. This functionality is enabled by a medical diagnosis service integration with the **Infermedica API**. This service describes possible illnesses sorted by probability, using patient's the symptoms provided in the in-app survey.

2. Enabling Patient-Expert text communication

When a patient is preliminarily diagnosed with a sickness, they can use the app to be connected to a specific type of healthcare professional who can establish the final diagnosis, and provide them with treatment recommendations and a remedy. The message communication in the app was integrated using the third-party service **PubNub**. The third-party service also has in-chat notifications.

3. Implementing a video communication feature

Besides the text chat, the app has built-in video calls. To implement this feature, our front end engineers created a custom UI and integrated several third-party services: **Twilio** platform for video calls, **VOIP** for incoming call notifications and call reception, and **CallKit** to display incoming calls.

Approach and Technical Info

The total scope of the project has so far reached 9.8 man-years. The project was completed over the course of 1.4 years by a team of seven professionals: **2 backend engineers, 2 frontend engineers, a QA engineer, a UX/UI designer, and a project manager.**

Cooperation between the client and AltexSoft is ongoing.

The technology stack included **Swift** (for iOS) and **Symphony** (for backend), **Firebase** (for application development), **Infermedica API** (for symptom checking), **PubNub** (for messaging), **Twilio, VOIP**, and **CallKit** (for video calls).



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