



Ellenex

A monitoring application for industrial sensors

About client

An Australian company specializing in the Internet of Things for industrial facilities. It manufactures high-precision water pressure and level sensors. The company's products are used by dozens of businesses in the food industry, construction, agriculture and other sectors.

Duration

1 month

Industry

IoT

Team

Project manager — 1

QA engineer — 1

Mobile developer — 2

DevOps — 1

Technologies

 Android

 iOS

 React Native

 AWS

Challenge

The Australian Ellenex company manufactures high-precision sensors which measure water pressure and level. They are used in energy and food industries, construction, agriculture and other sectors. Smart sensors can be pooled into a global wireless network as part of the industrial Internet of Things technology. However, the manufacturer had no mobile software solution they could offer to their customers. The application had to be able to integrate with the smart sensor network in order to enable an operator to remotely operate the equipment via mobile devices. The initial decision was to build an in-house piece of software based on an existing open-source product, adapting it to the company's needs. However, analysis showed that the software did not meet the requirements and could not be used to implement the desired functionality. The customer came to us with a request to create a mobile application from scratch.

Solution

Data collected from sensors had to be translated into a readable form to enable company employees to promptly respond to any abnormalities in measured values and carry out maintenance or repair works on the equipment. For this purpose, we had to elaborate a sophisticated solution based on a virtual assistant capable of processing sensor measurements and display them on a screen as plain-text messages. The application also had to be able to automatically detect the nearest sensors and let the user select the ones to read data from. We started to implement an algorithm to find the equipment and communicate with it, which would let operators in production facilities easily detect any faults and above-limit values by just walking through the plant with a mobile device in their hand. Our client-side interface was based on the React Native framework, while server-side components were based on Amazon Cognito (a part of the Amazon Web Services).

Result

The application was simultaneously released for the two most popular platforms, iOS and Android. Integrating a virtual assistant significantly improved operator response times to any changes in key equipment metrics and emerging faults. Employees in manufacturing companies mostly stay in the field rather than spend their working time at a computer. That is why they are not able to monitor a vast network of sensors in real time. Now, our mobile application does it for them. Many clients of the customer have already started using this software at their facilities and recognised its undeniable benefits compared to stationary applications.

