

# Plants growth monitoring application

**Our customer** is a company which specializes in developing smart multispectral sensors to monitor plants during the whole period of growth.

## The idea of the project

The customer has created an Artificial Intelligence (AI) device, which collects the data on the plants during their growth and, by doing that, is constantly learning to be able to make most of the received information. With the help of the device, it becomes possible to forecast the plants' growth, their behavior under certain conditions (weather, watering, etc.), the concentration of chemical substances in the plants at different stages of growth.

## The Task

The customer's team addressed us with the request to create a software web application that will analyze and monitor the health factors of the plants as well as the concentration of certain chemical substances in them during the growth period.

\*instinctools team had to complete all the required modules of the pilot version of the application in order to present them to a study group in order to receive funding for the next phases of the project.



## Solution

Our team suggested to create a web application that is integrated with internal tools and systems of the customer.

### We have developed a user-friendly interface which allows the customers:

- to configure the software on the smart sensors easily,
- to trigger the sensor at the beginning (later this would be performed automatically);
- to represent the analysis results, and actionable insights to the customer and to be continuously upgraded.

The **features** which were implemented allow the application to:

- Capture plant image
- Make plant annotations
- Capture sample image
- Make sample annotations
- Review data list
- Analyze plant data

The requested pilot version of the application was successfully implemented within 4 months on the following technologies:

- React Native
- Spark
- HDFS

## To be continued...

The needed funding was received by the customer and we have proceeded to the next steps of the AI device development.