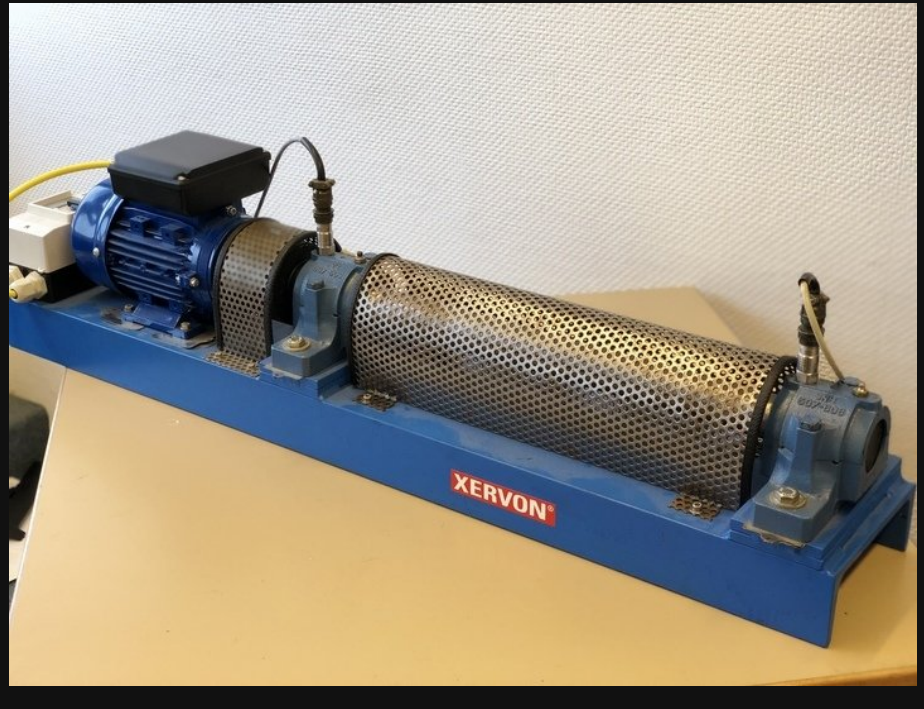
EXTRA-CUTE CROCODILES

(on-site)

TARGET GROUP

Engineering industry companies whoever wanna have **customized** IOT system featuring **efficient** AI in their specific tasks

CLIENT!



PROBLEMS

detect:

- bearing
- unbalance
- hammering
- loosen screws

without a human expert

IS THIS ONLY XERVON'S PROBLEMS?

nope!

WHEN WE ARE TALKING ABOUT THESE, WHAT WE ARE REALLY TALKING ABOUT?

SAYS

- efficient program solving
- convenience

PROVIDES

- **Proper** Machine Learning Algorithms
- **Intuitive** self-designed IOT super-hacking

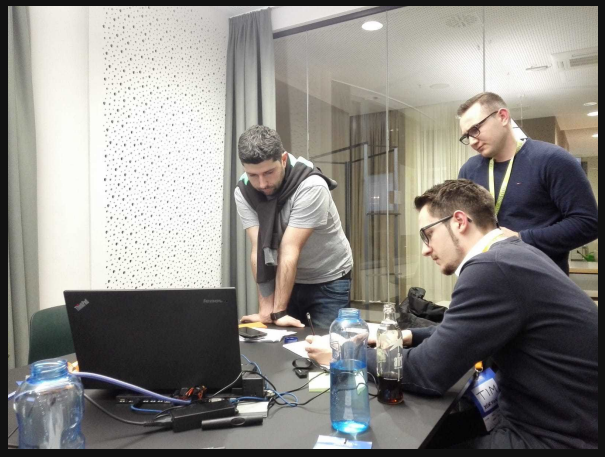
Benefits to our Clients:

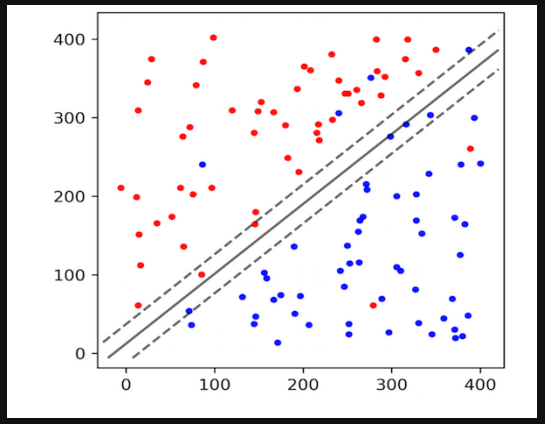
saving

TIME RESOURCE ENERGY MONEY

HACKATHON RESULTS

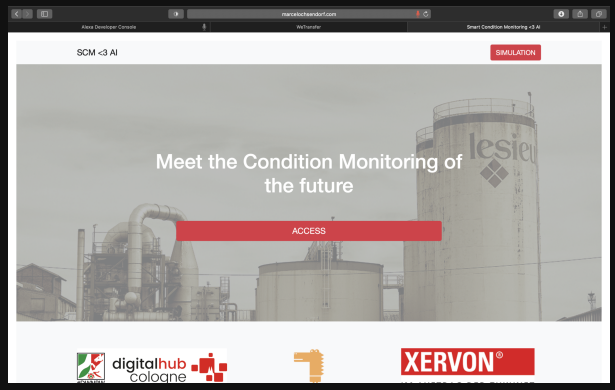
- carefully understanding the tasks and data





- analysis the feature and choose SVM and RNN as ML algorithm

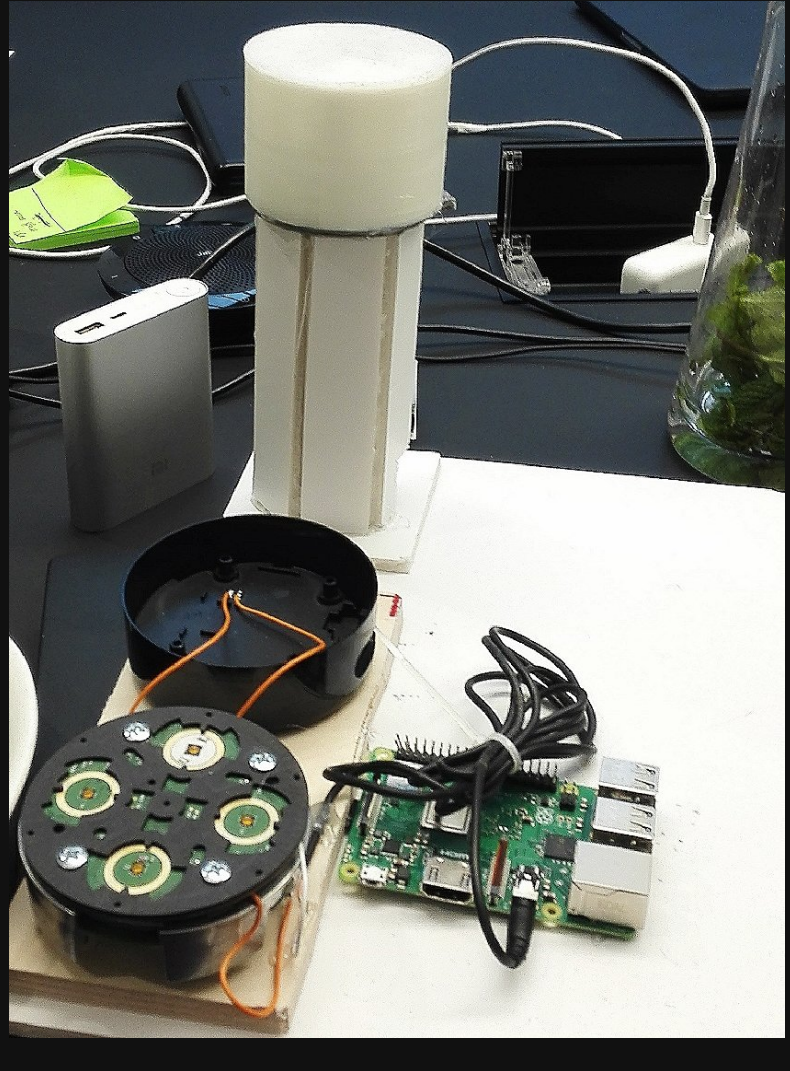
- monitor webapp
- self-made Hue light
- alexa and Pi super-hack



RESULT:

AUTOMATIC DETECTION: HAMMERING

CLOSE-UP OF PI-ALEXA HACK



LIVE DEMO

GOING FURTHER

POST- HACKATHON

DEVELOPING DIFFERENT ALGORITHMS

Hackathon:

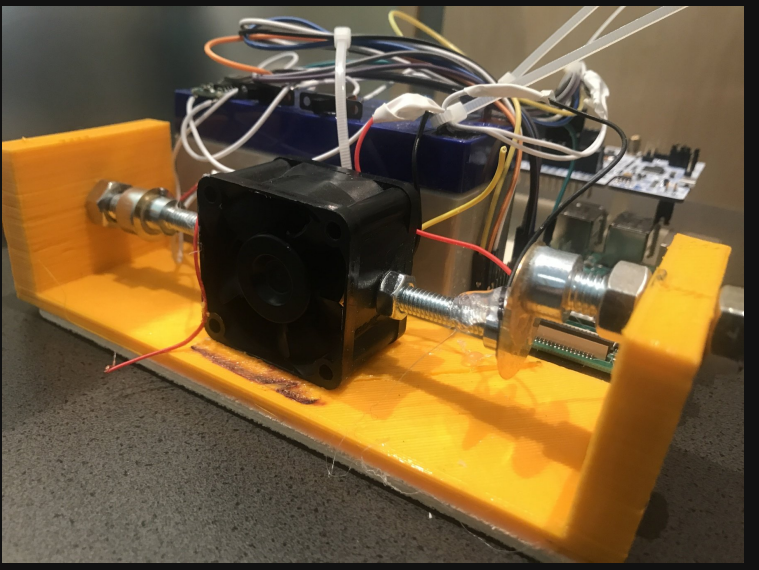
- **SVM ALGORITHM.**

Post-hackathon:

- **RNN-LSTM**
- **MULTILAYER PERCEPTRON**
- **LOGISTIC REGRESSION**
- **KERAS STANDARD CLASSIFIER**

BUILDING A TESTBENCH

to get more data to test our algorithm, we decided to build our **own** testbench to simulate test cases



THINKING IN A **LARGE** SCALE

"**working**" is good enough for a hackathon.

But being **functional** under a real environment counts

Using **MQTT** and **Lora**

Databases for long time storage

NEXT STEP

- search for an opportunity to replace expensive hardware.
- Evaluate our algorithm against different hardware configurations
- Designing an intuitive visualization tool that is simple to use and concurrent powerful

Marcel, Weiling, Vasil, Paul

say

THANKS