



# Integrating Multimodal Biometric Data

Grupp nr : 2



# Agenda

- Team and customer
- Demo
- Product Findings
- Project lessons & learned

# Team and Customer

## TEAM

- Adnan Altukleh - Sensor connection
- Isak Krüger - Database
- Kasper Renhorn Berg - Website
- Kussai Nassif - Sensor connection
- Nikola Antic - Website

## CUSTOMER



# The Product - Goal

## Purpose

- Helping athletes perform better

## Problem solving

- Helping archery recognize when they are most capable of performing the best shot using different sensors and AI

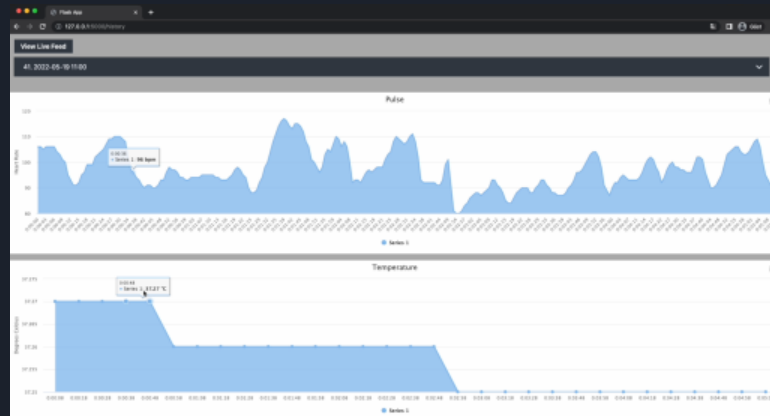
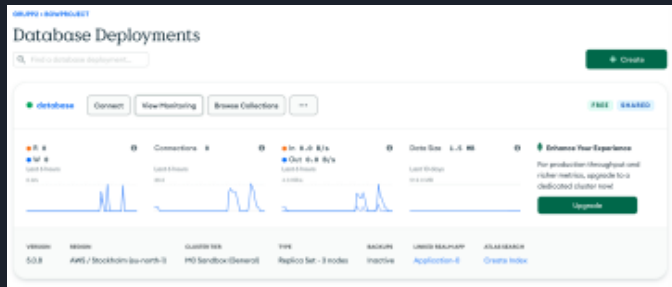
## Solved problem

- connected two sensor with Bluetooth
- plotting data in a website
- saving data in database

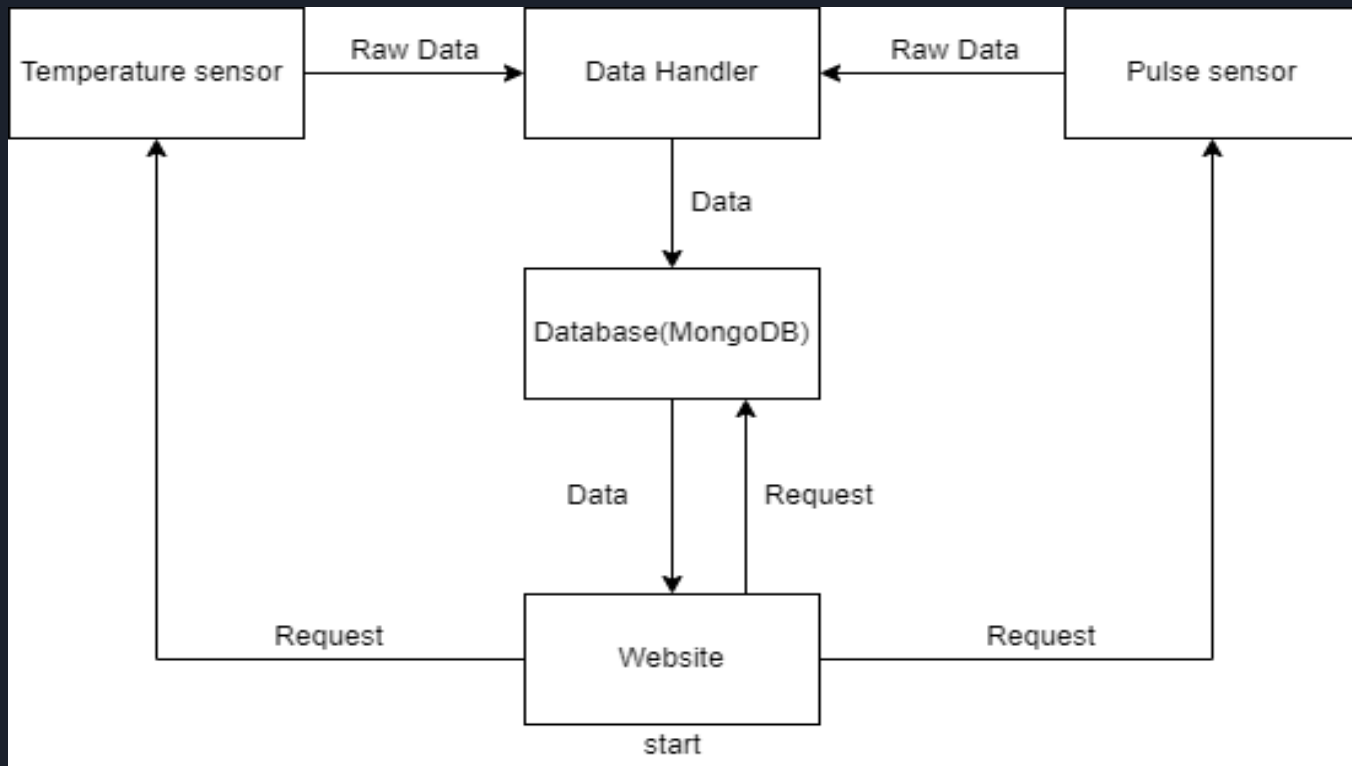


# Product

Polar Pulse Sensor & GreenTEG core Temperature sensor



# Product Architecture





# Used Technology

## Website

- Python (Backend)
- Javascript (Frontend)
- HTML & CSS

## Hardware

- Polar H10 (Pulse sensor)
- GreenTEG core (Temperature sensor)

## Database

- MongoDB (NOSQL)

## Communication

- Discord
- Snapchat
- Github
- Zoom



# Product Demo







# Product Findings

- **Acceptance status and requirements fulfillment**

- Pulse and Temperature sensors working
- Live plotted data
- Working database
- Webapp
- Create and visualiz sessions on our web site

- **Positive findings**

- Did a website and not an application
- Synchronizing live data
- Working with a scrumboard

- **Challenges within the product**

- BT Connection
- Read sensor data
- Synchronizing data
- Getting the brain sensor to work
- Adaptive code

- **Spent effort and reflections**

- 150 hours in total (30 h per sprint)
- More efficiency (not get stuck on one problem)



# Project lessons learned

## **Main experiences:**

- Technical understanding
- Problem solving
- Agile work

## **Decisions and actions with impact:**

- Good decisions
  - ❖ Prioritizing work (later sprints)
  - ❖ Used the Agile method
  - ❖ Used Nosql database
- Lesser good decisions
  - ❖ Focusing to much on not duable objectives (first sprint: API)
  - ❖ Not having a set working schedule

## **Experiences about work method:**

- Testing - Not testing as much as needed
- Github - version handling
- Progress - Scrum Board

## **Experiences with used technology:**

### **Not working**

- Contacting technical support from companies
- Reading documentation

### **Working**

- Python Bluetooth connectivity - Faster than the API
- MongoDB - Easy to use



Questions ?