Project / KSWS / NEidI / LDiCS

Smart Computing Summer 2022

VAC / MMIS / Sebastian Bader
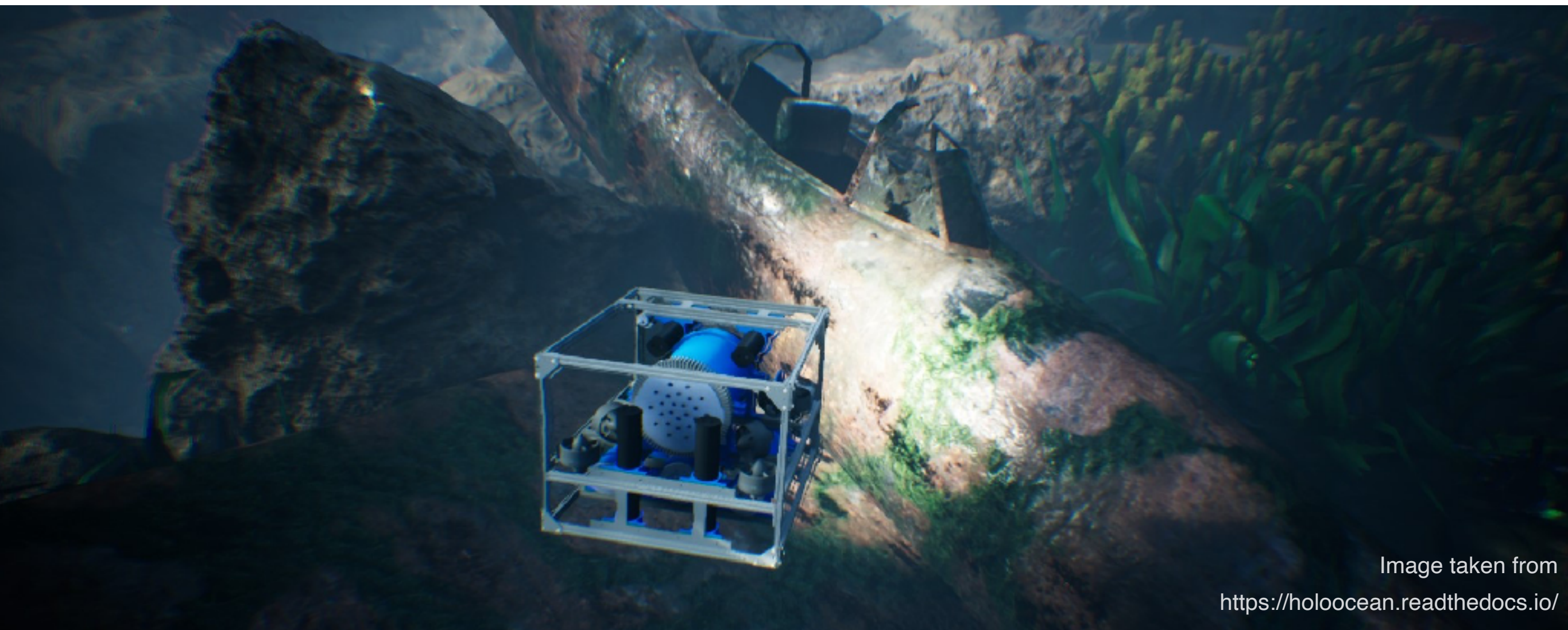
Topic Descriptions
(just a few examples)

OTC-DATA

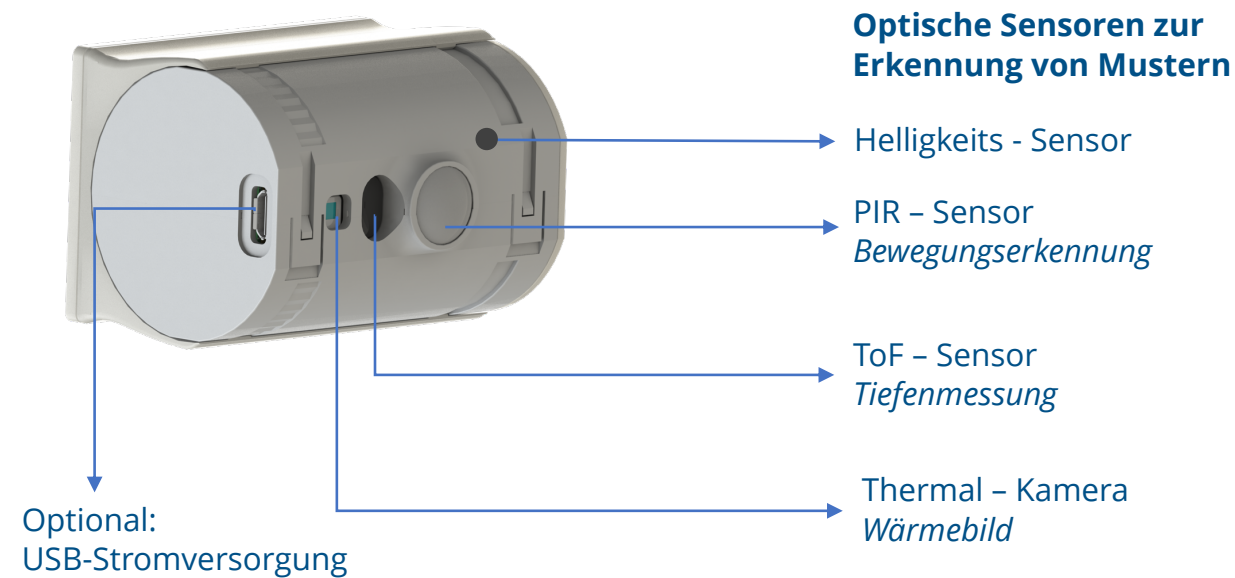Making sense of data in a maritim environment
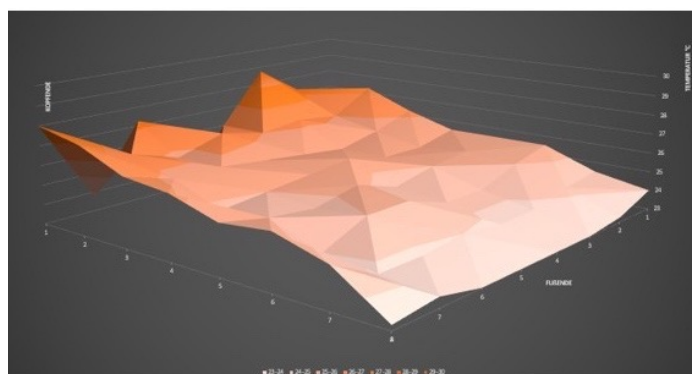
Underwater Simulation Environment

- Build an underwater simulation for selected areas within Rostock

- Develop and control virtual robots based on ROS

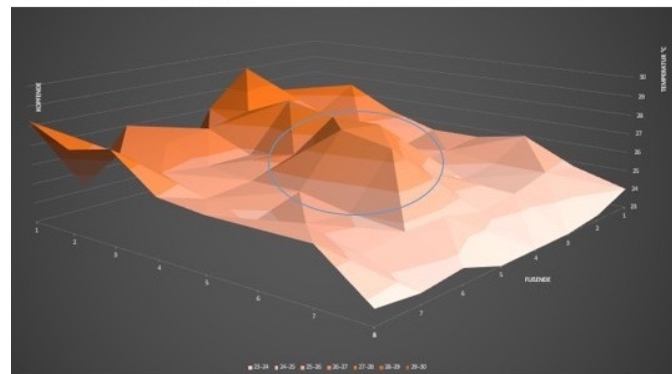- Collect simulated data and compare it to real world data

Image taken from
https://holoocean.readthedocs.io/

Sensor-based State estimation in Hospitals

GWA *Hygiene*

Optische Sensoren zur Erkennung von Mustern

Helligkeits - Sensor

PIR – Sensor
Bewegungserkennung

ToF – Sensor
Tiefenmessung

Thermal – Kamera
Wärmebild

Optional:
USB-Stromversorg

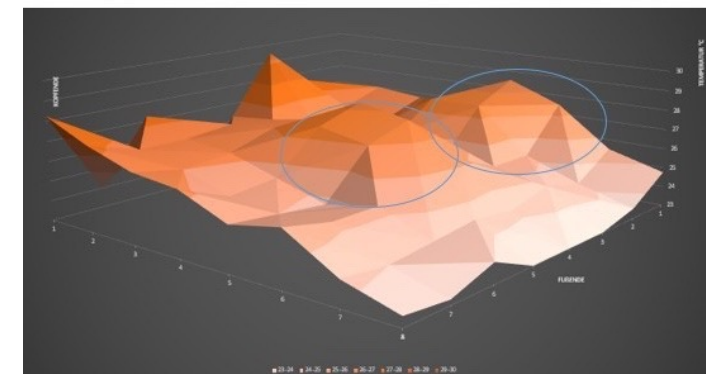- Befestigung an der
- Ausrichtung auf das

leeres Bett

belegtes Bett

**belegtes Bett &
Person rechts neben Bett**

Goals

Professional competence

- Tools for project management:
  - GIT, Timesheets
  - Find your communication tool as a team (and reflect your choice)
  - Find your method as a team:
    - waterfall, spiral, agile methods, continuous integration, …
    - https://en.wikipedia.org/wiki/Software_development_process

- Specification, Design and Implementation of a software system:
  - UML diagrams
  - Interface definitions for modules
  - Replicability of all tests

Methodological competence

- Project management:
  - Meeting notes:
    - each meeting should be headed by one team member
    - lead should be distributed (weekly, project phase, …)
  - Time sheets

- Ability to explore a topic in a less structured learning environment
  - there will be no traditional lectures / exercises
  - you will need to organize yourself / your team
  - you will need to organize meetings with supervisors if necessary and appropriate

Self- and social skills

- Organisation as a team
    - group meetings with dedicated roles: head of meeting, minutes, …
    - the roles should not be fixed and be noted in the meeting notes

- Assertion within the team:
    - Find your spot, be the lead for at least one sub-area

Organisation

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- Organisation

  - If interested, enroll via StudIP until April 6!
    - Project: Course ID 23818 (BSc)
    - KSWS: Course ID 23819 (BSc)
    - NEIDI: Course ID 23837 (MSc Inf)
    - LDiCS: Course ID 23876 (MSc CSI)

  - First meeting Thu. 7th April, 15:00 via Zoom
    (check StudIP announcement)
  - Limited number of participants

  - All topics will be presented during the kick-off on April 7.
  - Topics will be assigned on a first-come first-serve basis to fully formed teams of students (3-5 participants)