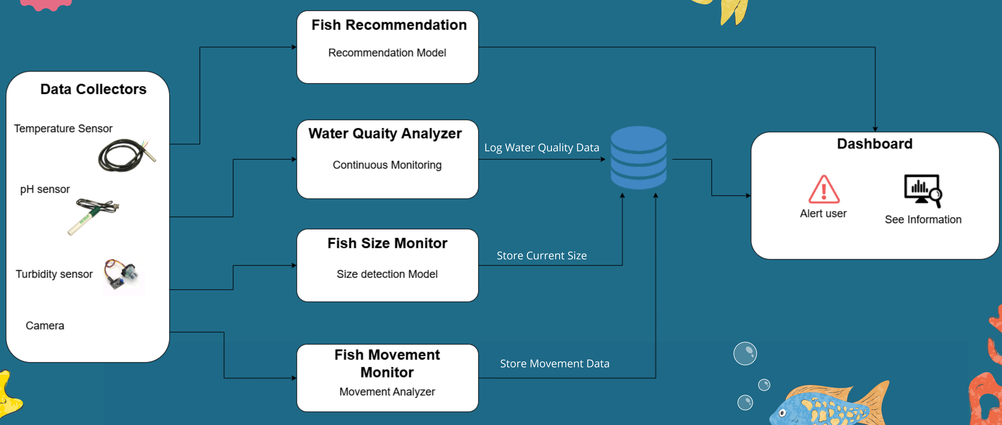
Fish Specie Selection And Growth Monitoring For Sustainable Aquaculture

1 Objective

Develop a smart system for aquariums that recommends suitable fish species based on water quality, continuously monitors water conditions, tracks fish size, and analyzes fish behavior to optimize growth and ensure sustainable Aquaculture.

2 Architecture



3 Timeline

Phase 1

- Finalize project requirements and system architecture.
- Literature review on water quality, fish species, and behavioral indicators
- Procure hardware (sensors, cameras, microcontrollers).
- Start developing the Fish Species Recommendation Module.
- Test and integrate sensors

Phase 2

- Complete the Water Quality Monitoring Module with real-time alerts.
- Develop the Fish Size Monitoring Module using computer vision.
- Begin the Fish Movement Monitoring Module to track activity and metabolism.
- Conduct testing and calibration of sensors and models.

Phase 3

- Integrate all modules into a unified system.
- Build the user interface (web app) for users.
- Test the system end-to-end for functionality and accuracy.

Phase 4

- Optimize the system based on testing feedback.
- Prepare project documentation and reports.
- Create a final presentation and demonstrate the system.

4 Technologies

Supervisor

Mr. Usman Wajid

Team Members

Muhammad Nauman 21p-8045
Ammar Raza 21p-8004
Sajid Ali 21p-8023