SAqFeeder: Smart Aquafarm Feeder and Monitoring System in Highly Turbid Conditions

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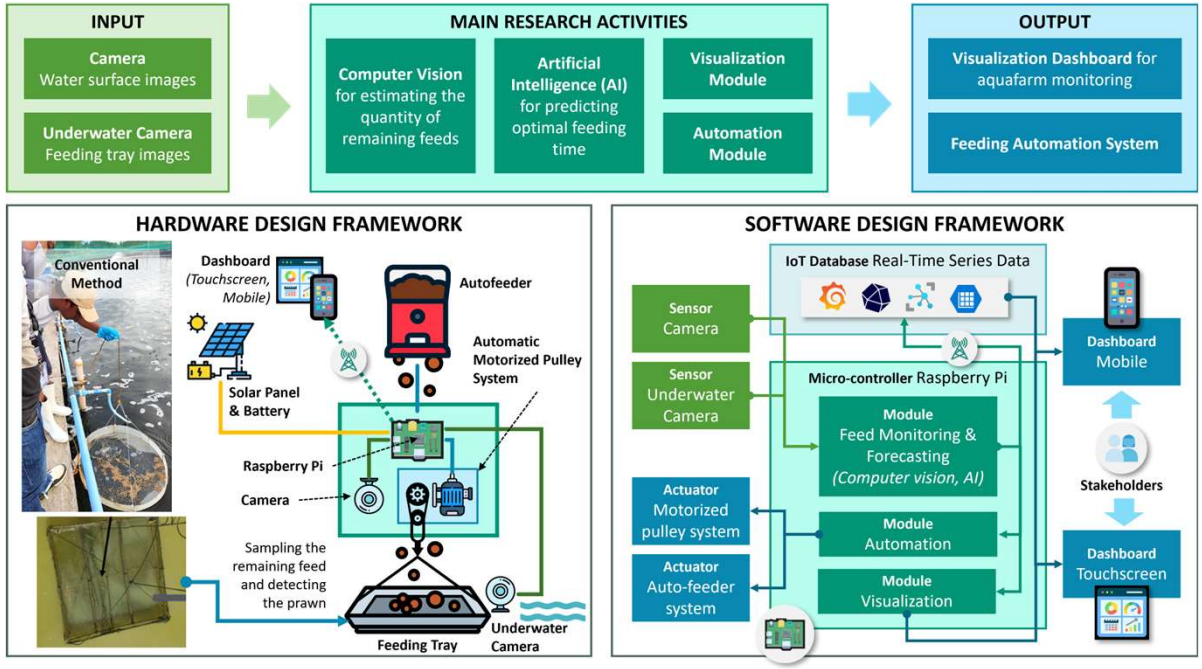
Introduction :

In the realm of fish and aquaculture monitoring systems, tools are needed to restore highly turbid images to monitor aquafarms and optimize its feeding process effectively. *SAqFeeder* aims to optimize the feeding process by developing an intelligent feeding system using computer vision, auditory filtering, and automated actuation, addressing the challenges of water turbidity. The project, spanning from 1 April 2024 to 31 March 2026, aims to (a) *design* a solar-powered actuation system to easily visualize the feeds from the feeding tray, (b) to regularly *estimate* the quantity of remaining feeds using computer vision, (c) to *develop* a dashboard to monitor the health status of the farm, (d) to *forecast* the best time to feed the aquafarm based on the data collected, and (e) to *automate* the feeding system. Two small-scale aquafarm beneficiaries are from the Philippines and Brunei.

Proposed Research Framework with Hardware and Software designs



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