Developing fish feeder system using Raspberry Pi

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ABSTRACT

The Fish owners of the pet fish are usually distressed when they are away from home environment because they could not feed the fish on time. Both reasons, food starvation and overfeeding risk the health of fish and leads to poor water quality in indoor fish tanks. Thus monitoring the fish feeder is of great importance which can be very beneficial for the fish owners. This work is aimed to design a fish feeder system using microcontroller and Raspberry Pi based web application to relax the distressed fish owners in feeding their fish on time. This system is designed to overcome the problem of fish dying due to fish feeder malfunction. With this design, the fish owner can monitor the fish tank for correct functioning of the fish feeder. Also, the user can set schedules for feeding the fish through the web application.

REFERENCES

1. W Fang and C.M Chang, "Development of an automatic feeder with the capability of knowing when to stop feeding", *Proceedings of the Annual International Conference and Exposition of the World Aquaculture society*, pp. 251, 26 April–2 May, 1991.

2. K. Barringtom, *History of Fish Keeping As A Hobby*, December 2013, [online] Available: www.ratemyfishtank.com.

3. M.Z Noor, A.K Hussian, M.F. Saaid, M.S. Ali and M Zolkapli, "The design and development of automatic fish feeder system using PIC microcontroller", *IEEE Control and System Graduate Research Colloquium.*, pp. 343-347, 2012.

4. J.V Lee, J.L. Loo, Y.D. Chuah, P.Y. Tang, Y.C Tan and Goh, "The Use of Vision in a Sustainable Aquaculture Feeding System", *Research Journal of Applied Sciences Engineering and Technology*, vol. 6, no. 19, pp. 3658-3669, 2013.

5. M.N. Uddin, M Rashid, M. Mostafa, H. Belayet, S. Salam, N. Nithe, et al., "Development of Automatic Fish Feeder", *Global Journal of Researches in Engineering: A Mechanical and Mechanics Engineering*, vol. 16, no. 2, pp. 14-24, 2016.