

Abstract

This project provides all the background information needed and step-by-step instructions to build an automated aquaponics system, using a raspberry pi. Aquaponics is the combination of raising fish and hydroponics (growing plants in water, and without soil), in one integrated system. This system benefits both plants and fish. The fish provide waste, which the plants use for nutrients. And the plants clean the water by absorbing the fish waste. This system was designed to nurture and grow both fish and plants, with little interaction from people. It accomplished this by monitoring and maintaining a controlled environment. At this point, the fish are healthy and the plants have had some time to grow, but fruit has not yet set. However, this system should prove to be highly productive in both crop yield and fish health.