

基于 NB-IOT 技术的智能鱼缸管理系统设计与开发

摘要

生活中的很多东西似乎都和网络有着或多或少的联系，计算机技术在发展的过程中同时也带动了网络的发展。而此论文就基于物联网结合智能技术，针对自动化的鱼缸管理进行开发设计出一套功能完备的鱼类养殖系统。智能家居从一定程度上改善和方便了人们的生活，而智能鱼缸就是在这些成果上的进一步发展。

对于一些鱼友来说，养鱼充满着满足和快乐，但是养鱼的过程或许并不是那么美好，因为有一些稀有鱼对水温，含氧量，水质，水压，换水频率周期都具有一定的要求，有时候掌握不好鱼的水压等因素就会造成鱼的死亡，更不用说有一些鱼早晨、中午、下午要求的水温不一样，很难有时间和精力面面俱到。所以就有了智能鱼缸的问世，智能鱼缸对于鱼友来说一方面在养鱼方面精准度高，时间控制合理，所需各项参数更精确，可以自动加热、自动感受室内的温度、对鱼缸里的温度自动进行调节、也可以自动过滤、自动供氧、自动喂食等等，另一方面可以起到一个装饰的作用，放到办公室、客厅、书房还有一些公共场所都可以，还可以起到一个当作夜灯或者是加湿器的作用。

智能鱼缸解决了以前传统鱼缸喂食以及日常照料的问题，并且是全自动化的供给。依靠成熟的整体生态场景一定可以面向更广的受众，有更高的价值。

关键词：NB-IOT 技术；MYSQL；智能鱼缸；监测终端。

ABSTRACT

Many things in life seem to have more or less contact with the network, computer technology in the development process also led to the development of the network. This paper is based on the Internet of things combined with intelligent technology, for the development of automatic fish tank management, designed a set of complete functions of fish culture system. Smart home improves and facilitates people's life to a certain extent, and intelligent fish tank is the further development of these achievements.

For some fish friends, fish culture is full of satisfaction and happiness, but the process of fish farming may not be so good, because some rare fish have certain requirements on water temperature, oxygen content, water quality, water pressure, frequency and cycle of water change. Sometimes, if you do not master the water pressure of fish well, you will die, let alone some fish in the morning, noon and afternoon Water temperature is not the same, it is difficult to have time and energy to cover everything. Therefore, with the advent of the intelligent fish tank, on the one hand, the intelligent fish tank has high precision in fish culture, reasonable time control, and more accurate parameters required. It can automatically heat, automatically feel the indoor temperature, automatically adjust the temperature in the fish tank, automatically filter, automatically supply oxygen, and automatically feed. On the other hand, it can serve as a decoration The role of the office, living room, study and some public places can also play a role as a night light or humidifier.

Intelligent fish tank solves the problem of traditional fish tank feeding and daily care, and is fully automated supply. Depending on the mature overall ecological scene, it can face a wider audience and have higher value.

Keywords: NB - IOT technology; MYSQL; Smart fish tank; Monitoring terminal.

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