**基于IoT的智能语音拐杖设计报告**

**摘要**

为了让盲人的出行更加安全，我们设计了以STM32F407VET6单片机为主控芯片，结合超声测距模块、GPS信号接收模块、GSM模块、语音模块、跌倒检测模块和视觉处理模块设计了一款智能语音拐杖。该拐杖通过超声模块和语音模块实现使用者周围障碍物探测和语音提醒,当使用者摔倒时系统控制GSM模块短信发送GPS位置信息给指定手机号，联系人还可以通过小程序获取使用者的具体位置。

**关键字：**语音提示、定位服务、物联网、智能盲人拐杖

**An Intelligent Voice Crutch Design Report Based on IoT**

**Abstract**

In order to make the blind travel safer, we have designed a smart voice crutch based on STM32F407VET6 microchip, combined with ultrasonic ranging module, GPS signal receiving module, GSM module, voice module, fall detection module and visual processing module. The crutch realizes the obstacle detection and voice reminder around the user through the ultrasonic module and the voice module. When the user falls down, the system controls the GSM module to send the GPS location information to the specified mobile phone number. The contact person can also obtain the specific location of the user through the small program.

**Keyword:** Voice prompt, Positioning service, Internet of Things, Intelligent blind crutches

**原创性声明**

本队郑重声明：所呈的论文，是本队在导师的指导下，独立进行研究所取得的成果。