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OPEN SOURCE ASSISTANT SOCIAL BOT

K. Mohamed Ismail[1], V. Velmurugan[2]

Department of Electronics and Communication Engineering, Agni College of Technology, Chennai, Tamil Nadu, India.

ABSTRACT

This paper proposes a system of social family robot. It is interactive and uniquely mobile. It is the social robot that can move around your home or office to help improve your lifestyle. It ensures your schedule, and keep your home connected and safe. Monitoring results can be stored only in sd-card or any external memory devices. It cannot be accessed via internet. It moves as per the instructions given. There is no social family robot which is interactive and uniquely mobile. This proves to be a major drawback in the existing system. The Raspberry Pi is a credit card sized single computer or SoC uses ARM1176JZF-S core. System on a Chip is a method of placing all necessary electronics for running a computer on a single chip. Raspberry Pi needs an Operating system to start up. In the aim of cost reduction, the Raspberry Pi omits any on-board non-volatile memory used to store the boot loaders, Linux Kernels and file systems as seen in more traditional embedded systems. Rather, a SD/MMC card slot is provided for this purpose.

Keywords: Computer module, Global positioning system, Graphical user interface.

INTRODUCTION

We are at the advent of a new era where billions of IoT devices will be collecting every bit of our daily life. We have fitness devices that count our steps, phones or cars that record our where abouts, and home devices such as thermostats, smoke alarms, and security cameras that monitor what goes on at home. Also becoming widely available are medical devices, from scales, to blood pressure, electrocardiogram monitors, etc. Today, consumers are used to the model where social networks, such as Facebook and Snapchat, own the intellectual property of data shared on their systems. Would all the sensitive data collected by IoT devices. Furthermore, our data are now kept in different silos. As more valuable data becomes available, it is important that we can access all our data and share them with whomever easily and confidentially. For example, it is desirable for us to share our medical records, along with all the data collected by a myriad of medical devices, with our doctors. In this way, doctors can provide better health care at a lower cost as they can monitor a large number of patients closely and pay more attention to those who need it. Recently, we have started seeing cloud services that consolidate our data from a variety of sources. For example, Google Photos helps us find pictures saved across all the different photo web services with the help of its sophisticated face recognition algorithm. The website IFTTT helps us connect all our different accounts, from banking, Facebook, Twitter, to data on our mobile phones [1]. All these data consolidation services require that we give them the credentials to our various accounts. In addition, virtual assistants, such as Google Now, Apple's Siri, Microsoft's Cortana and XiaoBing, Facebook's M, and Amazon's Alexa, are emerging as killer applications that are

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providing simple, intuitive, personalized natural language interfaces to a wide collection of apps and services. In order to implement necessary precautionary measure as early as possible to minimize the loss of yield. If farmer is unable to identify the symptoms of the disease, a sample of the infected crop is sent to the laboratory for molecular analysis which is time consuming to predict the type and severity of the disease. As the continuous monitoring task by human is tedious and classification of disease by farmer is difficult, an automated monitoring of crop will be of significant benefit to the farmers. The evolution of the autonomous mobile robotics technology in recent time and need for precision in agriculture has resulted in increased study on its application in agricultural operations. The agricultural environment is highly unstructured, with different crops exhibiting chaotic physical characteristics in terms of height, canopy size, etc. Implementing robot in such an environment is quite a challenge. Recent improvement on the sensor technologies has increased its reliability and accuracy in robotic applications. For example navigation by Global Positioning System (GPS) has become accurate within centimeters. But this technology cannot be applied in green housed based cultivation as the closed structures blocks signal transmission partially or completely depending on the structural material. Ultrasonic based sensor was used to estimate acoustic density profile and symmetry of the plants. This information can be used to develop a navigation strategy. Robot using visual odometer has been studied in green housed based farming which estimates its rotation and translational positions relative to the world coordinate system. Machine vision based navigation has been promising but it suffers from the error arising due to varying indoor lighting conditions.

PROPOSED SYSTEM

Our aim is to develop a low cost system that can help the humans and its surrounding in order to make a Personal Assistant robot more efficient and faster. It ensures the daily schedule and Keep interact with the user. This system is having the ability of human detection. The system can also detect obstacle. It can push the notifications and can mirror screen remotely. The block diagram of the proposed system is shown in the figure 1.

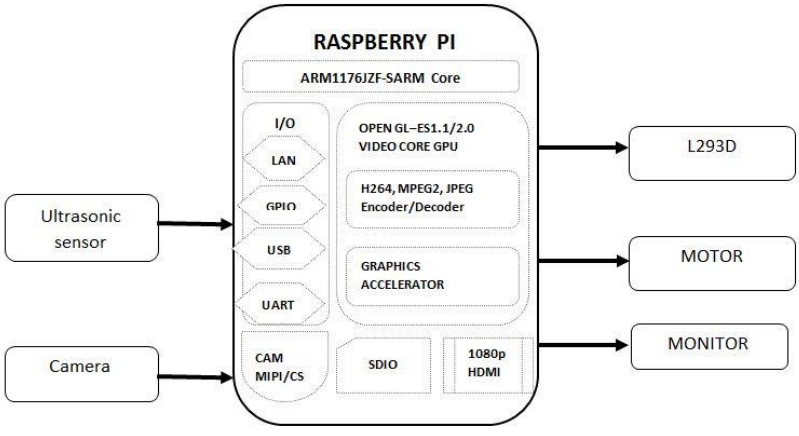

Figure 1. Block diagram of the proposed system

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HIGHLIGHTS OF OUR WORKING MODEL

- Surveillance plays very vital role to fulfill our safety aspects in small houses and huge industries.
- Inform the user immediately when the burglary happens.
- Monitoring and controlling can be done without human intervention.
- System becomes fully automatic so the amount of error decreases and the efficiency increases.
- It offers privacy on both sides since it is being viewed by only one person.
- An Energy efficient portable system is proposed, that can take pictures when the burglary happens.
- Autonomously in unattended environments.
- Alerts the controlling person with SMS.
- Surveillance System consists of mainly two parts
  - ✓ Hard-wired surveillance systems.
  - ✓ Remote Access Systems.

WORKING MODEL OF A BOT

It is a social robot and it can move around your home or office to help improve our lifestyle. It ensures your schedule and keeps your home connected and safe.Monitoring results can be stored only in sdcard or external memory devices. It cannot be accessed via internet. It moves as per the instructions given. There are no family bot which is interactive and uniquely mobile still now. This proves to be a major drawback in an existing system. The top view and front view of working model of the robot is shown in figure 2 and 3.

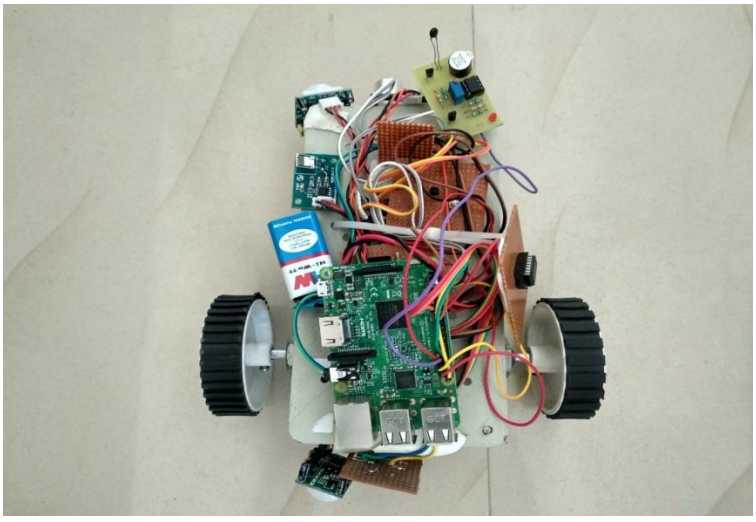

Figure 2. Top view of the working robot

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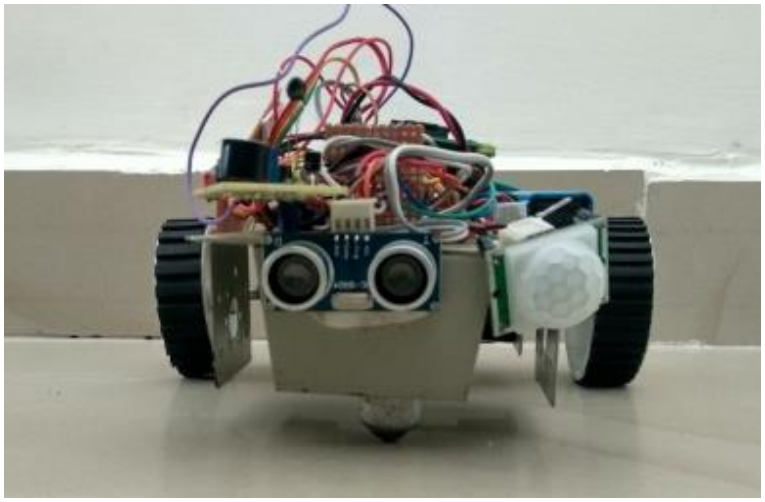

Figure 3. Front view of the working robot

The Raspberry Pi is a credit card sized single computer or SoC uses ARM1176JZF-S core. SoC, or system on chip, is a method of placing all necessary electronics for running a computer on a single chip. Raspberry Pi needs an operating system to start up. In the aim of cost reduction, the raspberry pi omits any on-board non-volatile memory used to store the boot loader, LINUX kernels and file systems as seen in more traditional embedded systems. Rather, a SD/MMC card slot is provided for this purpose. After boot loader, as per the application program Raspberry Pi will get executed. An open source platform that encourages open competitions, fosters inter-operability, and gives user the ability to access and share confidentially all their data will open up opportunities for many new applications. By making apps easily to write with thing talk and providing a crowd-sourced open-sourced Thingpedia to collect interfaces and applications.

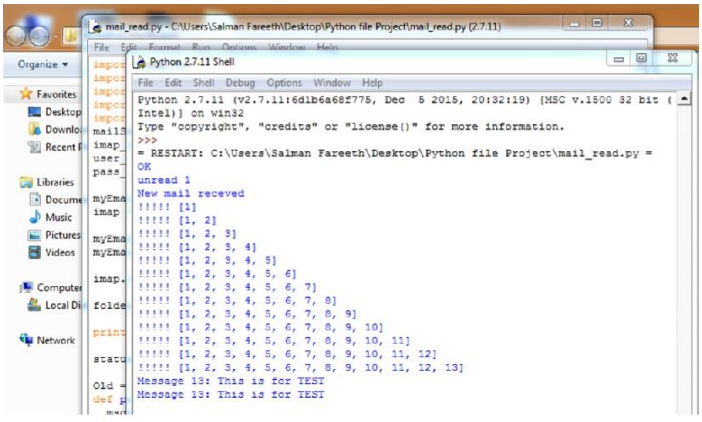

Figure4. Simulation output for mail sent

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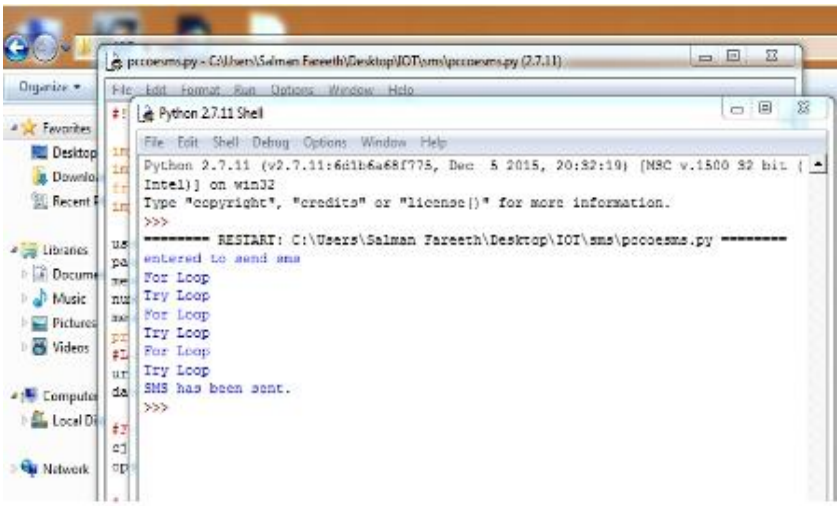

Figure5. Simulation output for SMS sent

CONCLUSION

An open platform that encourages open competition, fosters inter-operability, and gives users the ability to access and share confidentially all their data will open up opportunities for many new applications. By making apps easy to write with Thing Talk and providing a crowd-sourced and open-source Thingpedia to collect interfaces and apps, we can potentially create better apps than those provided by closed proprietary systems.

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