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Research Papers Published in Journals

2021-22

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:03/Issue:07/July-2021 Impact Factor- 5.354 www.irjmets.com

E PATIENT MONITORING SYSTEM USING ARDUINO

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ABSTRACT

The IoT-based completely affected character health monitoring device is a regular progressive term given to any clinical machine that has internet capability and may diploma one or extra healthcare records of a affected character who is related to the device together with heartbeat, body temperature, humidity, blood pressure, ECG, steps, etc. The machine can record, or transmit and alert the medical doctor if there may be an abrupt exchange withinside the affected character's health. The IoT-based completely health monitoring device is used in which the affected character and medical doctor for related health experts are at one in every of a type locations. For example, a affected character can stay at a one in every of a type location and preserve his or her routine existence and a medical doctor can show the affected character's health. Based on the received records from the affected character health expert can prescribe the fantastic treatment or take straight away motion in case of an emergency. In this project, we have got were given related temperature sensor, heartbeat sensor, ECG sensor, and air fantastic sensors to Arduino and with the help of the ESP8266 Wi-Fi, the module sends the records to Thing speak Internet of things platform. If there may be an abrupt exchange withinside the affected character's health, an SMS alert may be sent to the family member and attending medical doctor.

Keywords: Arduino Uno, Sensors, GSM Module, Wi-Fi Module, I2C Module.

I. INTRODUCTION

Today change in the environment increasingly growing number of people with chronic diseases, this is due to different risk factors such as dietary habits, physical inactivity, alcohol consumption, viral attacks, etc. Due to the lack of a perfect health monitoring system, patients suffer from serious health issues. Like the recent coronavirus attack that has ruined the economy of the whole world to an extent is an example of how health care has become of major importance. In such areas where the infection is spread, it is always a better idea to monitor these patients using remote health monitoring technology. So the Internet of Things (IoT) based health monitoring system is the best current solution for it. Remote Patient Monitoring System arranges the empowers observation of patients outside of customary clinical settings (e.g. at home), which extend access to human services offices to bring down expenses. The important objective of that project is the design and implementation of a smart patient health tracking system that uses Sensors to track patient health and uses IoT to inform their loved ones and attending doctors in case of any issues. The coming of the Internet of Things (IoT) technologies facilitates the progress of Patient healthcare and minimizes the big issue from face-to-face consulting to telemedicine. This project facilitates health expertise to continuously monitor the health condition of the patient. This proposed system will improve the current healthcare system that may protect lots of lives from death.

II. LITERATURE REVIEW

2.1 Review: 1

An IoT basis Patient Health Monitoring System (June 2018)

D.Shiva Rama Krishnan, Subhash Chand Gupta, Tanupriya Choudhury

This tool proposed a Temperature and heartbeat sensor for tracking patient's health. Two sensors are related to the Arduino-Uno. The records from sensors is non-prevent to the IoT platform the use of a wireless network. In case of any fast changes in patient's coronary coronary heart rate or body, a temperature alert is sent to their loved ones.

International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 05 Issue: 07 | July - 2021 ISSN: 2582-3930

IOT Based Automatic Medicine Reminder using Arduino

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Abstract- This project patient medication reminder could also be a system which helps in medication administration and monitoring. This method consists of an ATMEGA328P microcontroller with an inbuilt EEPROM and a real-time circuit. This method is driven by an embedded program that inputs predefined parameters which are processed supported the input variable entered via a programme device just like the keypad. All the entices made on the keypad are concurrently and simultaneously displayed on the LCD panel of the device. The logic for the processing is formed into the embedded program to initiate the alert through an audio alarm. Not only does it have a device, but also an LCD which displays the medication to be taken at the reminder time. Also, it's Wi-Fi module to send the E-mail to the respective person which we are visiting use GSM module to send SMS to the particular person, so he can take medicines although he's apert from this machine.

Key Words: Arduino Uno, GSM Module, Wi-Fi Module, Real Time Clock, IOT

1. INTRODUCTION

In our busy and hectic life, we sometimes forget to require medicines on time. In hospitals it becomes difficult for doctors to remind every patient to require the medicines on time. The proper solution for this problem should be an Automatic Medicine Reminder alarm which can alert the patient either by sending email/SMS or by triggering some alarm. In daily life the overwhelming majority of people must take drugs which wasn't there in recent years and also the explanation for this is often infections are expanding in enormous sum. So sometime numerous individuals interact with these illnesses. Some illnesses are transitory sicknesses while many are perpetual hazardous infections. Dangerous infections get blends in with the form in order that they cannot leave the body ever and that then increments in fast time. Lifespan of individuals clothed to be less a results of such infection and to survive or to hold on with a superior life we want to require meds routinely and further more in huge sum. We must always be in guidance of Doctor who instructs us to require wanted pills in wanted manner so patients face issues like failing to recollect pills to require at ideal time and furthermore when Doctor changes the medication of medication patients have to recall the new timetable of medication. This issue of neglecting to require pills at opportune time, taking incorrectly medications and incidentally taking of lapsed medication causes medical problems of patient and this experience the ill effects of undesirable life.

2. Block Diagram

The medicine reminder system is powered using 5V supply. When it first boots up, it shows a welcome message as "Medicine Reminder System". The LCD screen is set to cycle in three screens. The 1st screen shows message as "Stay healthy, Get well soon". The second screen is a help screen which tells to press select push button to select any one time slot to remind (once/twice/thrice in a day). The time slot is changeable in program and can be configured accordingly. We have divided time slots into three modes. Mode 1 selects to take medicine once/day at 8:00 am. When user press 1st push button. Mode 2 selects to take medicine twise/day at 8:00 am and 1:00 pm. When user press 2nd push button. Mode 3 selects to take medicine thrice/day at 8:00 am, 1:00 pm, 8:00 pm, if user press 3rd push button. When user selects desired slots by pressing push button, the user input is recorded and the time is taken from RTC. When time is matched with selected time slot then the buzzer starts buzzing. User can stop the buzzer by pressing STOP button. If user will not stop the buzzer then buzzer buzzing within 5 second.

We are using GSM module for sending the message from system, and NodeMCU for the sending the mail from the system. As buzzer alarms simultaneously system sends the message to the patient also it sends the mail to the patient through NodeMCU

e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
Volume:03/Issue:07/July-2021 Impact Factor- 5.354 www.irjmets.com

SCHOOL BUS MONITORING SYSTEM USING ARDUINO

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ABSTRACT

The goal of this paper is to monitor the school bus using Arduino ATMEGA 328. The commute of a student from home to school and from school to home has always been a source of concern for parents about their children's safety due to the high crime rate and accidents that occur nowadays. The proposed system has been developed to solve a small part of the school-age children's safety issue. The system uses GSM technology to send a message to parents regarding their children's arrival on the bus. This ensures parents that their child has safely reached the bus. This system also uses Radio Frequency Identification Technology (RFID) to identify the students and track their attendance on the bus. Attendance information is sent to the school in the form of a spreadsheet to eliminate the use of manual attendance. This system also provides an emergency button facility in case of an emergency. With the emergency button facility, it will also track the exact location of the bus whenever an emergency condition occurs and notifies school officials of its location. With this system, children can easily identify the correct bus stop by seeing the name of the stop on the LCD Display.

Keywords: Arduino Uno, RFID, GSM, GPS, NodeMCU.

I. INTRODUCTION

It has always been a major issue to keep improving children's security. Children's safety is of great concern to their parents due to the epidemic of kidnappings and road accidents parents are always worried about their children's security. Children are some of the most vulnerable members of our society and are frequently the victims of violence due to the lack of skills to defend themselves. School buses play an essential role in transporting most children every day around the world. Several problems might disturb parents about school-going kids traveling to and from school. This system is therefore implemented, and its main purpose is to provide safety and security to school-age children during the transportation process from home and to school. By implementing this system, a little piece of school-age children's security problem will be solved. The parents will receive an SMS whenever their children board the school bus, which assures parents that their children have safely arrived at their destination. Child boards bus with RFID tag wore by the child-placing that tag in front of the RFID reader, then this system sends a message regarding the arrival of the child using GSM technology. This system is very useful for parents to find out that their children have reached their destination safely. The system also tracks student attendance using RFID in the form of a spreadsheet and transmits the data over WiFi to the school server. This system is also helpful to teachers in eliminating the need for manual attendance sheets. This system provides an additional facility called an Emergency Button. If an emergency occurs, the system sends an emergency alert message to school management, so parents and school administration are quickly able to reach out to children with necessary help. This system displays the current bus stop name. It solves a problem related to children not being able to identify their correct bus stop and they inevitably get off at the wrong bus stop, thereby creating problems for that child and also for their parents. The overall system is very useful and helpful for parents, teachers, school management as well as to children to assure safety and security during school Bus Transportation.

II. LITERATURE REWIEW

2.1 Review: 1

Automated Bus Stop Alert for Passengers Using GPS (May 2016)

Vijetha Tummala1, S. Akshay Kumar2, P. Srinivas3, G. Sravan4

Smart Restaurant Menu Ordering System for using Raspberry PI 3B

Aishwarya Khude, Puja Salgude, Pooja Sawant, Komal Bansode, Sadashiv Badiger

Abstract—E-Menu is an interactive menu for restaurants, hotels and other entertainment venues, viewed on a networked LCD screen located on tables, offering patrons a full range of ordering and interactive entertainment services. Patrons want good, efficient service, they would not like to wait around to order food or drinks, to receive their order or ask for the bill. Wireless hotel menu system is designed to accommodate the needs of various of properties viz hotels, models, resorts clubs, small, hotel franchisees and club's small hotel franchisees and clubs. Wings Front Desk Hotel Software is the modern solution which has a whole range of integrated modules to cover every aspect of property management. The generalized version of Wings Front Desk, Hotel reservation software is state-of-art technology and extremely easy to use in nature. With the information we received from our users in the User Needs and Analysis report we have engaged in and iterative design cycle to develop a final interactive graphical interface for our electronic menu system.

Index Terms—Raspberry PI, Power Supply, Touch Screen, Laptop or mobile.

1 INTRODUCTION

Touch screens as a popular user interface are more and more common. Applications span from public information systems to Customer self-service terminals. Thus, as a Logical step, more and more devices today Feature this kind of user interface, e.g., Bank Automatic teller machines (ATMs), personal Digital assistants (PADs), mobile phones and displays. A touch screen is a display that can detect the presence and location of a touch within the display area. Let's one do so without requiring any intermediate device, again, such as a stylus that needs to be held in the hand. Such displays can be attached to computers or, as terminals, to its networks. Therefore, it is very suitable for restaurant & time saving. It enables one to interact with what is displayed directly on the screen, where it is displayed, rather than indirectly call the waiter & ordered the menu. These devices also allow multiple users to interact with the touch screen simultaneously. Touch based interfaces have been around for a long time in consumer electronic devices, and even longer in research labs, but it has only been recently that the wider public has taken a keen interest in this mode of humancomputer interaction. The touch screen is an assistive technology.

2 FUNCTIONALDESCRIPTIONS

Some related works for the smart ordering system based on Web Server are reviewed in this section. This paper discussed about the comparison with the traditional enterprise management mode, wireless self-service ordering management information system realizes the intellectual and information listed restaurant management. The touch screen display of taste and food prices to customers for their input orders directly with touch. This system completes automatically receive data, storage, display, and analysis. Ordering by LCD display device name restaurant food items and by touching the LCD can be distinguished customers the price, quantity. Customers can order their meals with it immediately. In the system, the Web Server technology as the communication medium and ARM 11 processor" s as the hardware which implements faster ordering system. It consists of a GUI interface at customer" s table as a remote control and monitor at kitchen display the ordering information systematically. The system uses a small module (raspberry board with touch screen and stylus) which is placed on each table for the customer to make orders. Order is made by selecting the menu item on touch screen. This data comes together with the menu. A signal will be sent to the order section by Web Server communication, and automatically will be displayed on a screen in thekitchen.

3. BLOCK DIAGRAMDESCPRTION

Fig1 shows block diagram of the system. The whole system is divided into two areas which are User area, Kitchen area. The system uses a 3.2-inch touch screen for the customer to make orders. At the User section, the customer will make an order by selection the menu item category on the LCD. This menu comes together with the different item along with prices and quantity require, when the user finishes his selection and presses the send button the data will be sent to the Kitchen section by Web Server communication. Web Server module at the Kitchen section received and decodes the data and it will display the menu that had been chosen by a user at the screen in the kitchen. The processed data is to be sent to the kitchen Monitor display for ordering purpose this system.

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Raspberry Pi Based Vehicle Starter Using Face Detection

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A B S T R A C T

The aim of this undertaking is to apply the Raspberry Pi for creating a facial recognition device for vehicle get admission to control. For future technology automobiles, this initiative adds state of the art safety measures. For the expected superior device, the Raspberry Pi will function a command module. Only legal and registered humans are allowed to function the auto because of the sturdy safety device. Generally secret is used to release and begin a vehicle.

Keywords: Raspberry Pi, Camera Module, Alcohol Sensor, Solenoid Switch

1. Introduction

In this contemporary time several incident takes region like robbery, stealing unwanted the front takes place abruptly. So the protection does subjects in this each day life. People always live busy in their normal artwork moreover wants to ensure their safety of their cherished things. Sometimes they forget about approximatly to the look after their important things (keys, wallet, credit score rating gambling playing cards etc). Without the ones, they are now no longer capable of get proper of access to their home or any location they need. Traditional safety tool require the character a key, a safety password, an RFID card, or ID card to have get proper of access to to the tool. However, the ones safety systems have deficiencies example, they will be forgotten or stolen from unauthorized people. As the result, there can also additionally be need to increase software program application that guarantees a higher safety level is a template. One of the precise capabilities of our thoughts that it could anticipate best in pictures now not in words. Once you may forget about approximately to keep your Car's key but you will in no manner forget about approximately to hold a face with you. God has given each person a very precise face. Face is the most important part of our body, just so it could reflect many emotions of a character. From a long 365 days ago, we are the use of non-residing thing (smart gambling playing cards, plastic gambling playing cards, PINS, tokens, keys) for authentication and to get provide get proper of access to in constrained areas like ISRO, NASA, and DRDO . There are sorts of biometric physiological characteristics (like face, fingerprint, finger geometry, hand geometry, palm, iris, ear and voice) and behavioral characteristics (like gait, signature and keystroke dynamics). Sometimes your behavioral of inclinations also can moreover changes because of the illness, fear, hunger etc. Face detection and recognition tool is more cheap, simple, accurate and non-intrusive method as examine to distinctive biometrics. The tool will fall into instructions as face detection (1:1) and face recognition(1:N).In the face detection we must classify among face in the place of non face location even as in recognition method we must examine that single face picture graph with multiple pictures from the input picture graph. In This artwork uses BCM2835 processor, popularly referred to as Raspberry pi Board. The center of the board is the above processor. It is a RISC processor based mostly on ARM11. The board has precise capabilities like virtual camera interface and make contact with show display screen that make it suitable for real time picture graph processing Open cv consists of huge amount of constructed in functions for picture graph processing. It is beneath Neath BSD license and therefore libraries are free of proprietary cost. The full-fledged library functions simplify the complex mathematical operations.

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e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:03/Issue:07/July-2021 Impact Factor- 5.354 www.irjmets.com

ARTIFACTS DETECTION IN EEG SIGNAL USING CONVOLUTIONAL NEURAL NETWORK

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ABSTRACT

Electroencephalogram (EEG) performs an grave position in staring at the mind pastime and conduct. EEG can decide adjustments in mind pastime that beneficial in diagnosing mind disorders, seizure disorder. Emotions are complicated phenomenon that play enormous roles with inside the pleasant of human existence. Emotion performs a main position in motivation, perception, creativity, attention, studying and decision-making. A important trouble in know-how emotion is the evaluation of the defining of feelings. Emotion reputation the use of mind indicators has the cappotential to extrade the manner we pick out and deal with a few fitness conditions. The Synchronized brainwave dataset incorporates electroencephalogram sign values and information of the patient. The proposed method the use of Machine studying strategies to locate emotion will assist people enterprise and academic group to take choices and enables human beings to be extra cushty in expressing their problems. It an crucial problem in electroencephalogram. Approach pick out among EEG sign constitute the distinction among EEG sign resulting from emotion detection. To pick out the green functions for emotion detection in EEG sign processing. Electroencephalogram primarily based totally emotion detection has attracted in extensive hobby in latest year.

Keywords: Electroencephalography, Emotion Detection.

I. INTRODUCTION

EEG is one of the device used for studying mind pastime. With the improvement of deep studying and synthetic intelligence technology, emotion reputation has a huge utility prospect with inside the discipline of human-laptop interaction, which has been extensively worried with the aid of using researchers. According to neurophysiology and psychology studies, electroencephalogram (EEG) can't handiest replicate of the mind, however can also replicate the powerful records of the human emotional nation and the era or pastime of emotion is carefully associated with the pastime of the cerebral cortex. Emotion performs an crucial position in our each day existence and work. Real-time evaluation and law of emotion will enhance human being existence and make it better. In latest years, EEG indicators had been regularly brought into the sphere of emotion reputation due to their robust objectivity and excessive accuracy of category. Emotion reputation is an crucial studies problem in EEG, and feelings may be meditated in EEG. For example, the feelings of worry and anxiety have one of a kind waveform at the EEG. These waveforms aren't apparent however play an crucial position within side the studies place of the mind–laptop interface (BCI) and emotion reputation. Emotion reputation is an crucial studies problem in EEG, and feelings may be reacted in EEG. For example, the feelings of worry and anxiety have one of a kind waveforms at the EEG. These waveforms aren't apparent however play an crucial position within side the studies place of the mind laptop interface and emotion reputation. In evaluation to the nonverbal or verbal behavior, EEG indicators are without delay recorded from human's mind cortex and for this reason they may be extra dependable in reacting the internal emotional states of the mind. Consequently, the use of EEG facts may be extra correct than conduct facts whilst used to expect human's emotion. For this cause, the popularity of humans motion from EEG indicators has emerge as a completely lively studies subject matter in modern day emotional Brain Computer Interfaces targets to deduce emotion the humans emotion states primarily based totally at the recorded EEG indicators.

II. LITERATURE REVIEW

1. **Paper Name**: Accurate EEG-Based Emotion Recognition on Combined Features Using Deep Convolutional Neural Network

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Color Sorting Machin Using Arduino Uno

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ABSTRACT

Sorting of object is an essential mechanical process in which difficult work is quite required. Chronic manual arranging makes consistency troubles. Machines can perform mainly dreary assignments superior to human beings. Laborer exhaustion on sequential manufacturing structures can result in decreased execution, and purpose troubles in retaining up object fine. A employee who has been appearing research undertaking over and over may additionally in the end forget about to recognize the color of item, but a machine in no way. On this paper a compact records close to arranging of articles based totally totally on shading has been implemented making use of TCS3200 shading sensor with SERVOMOTORS associated with AURDINO UNO.

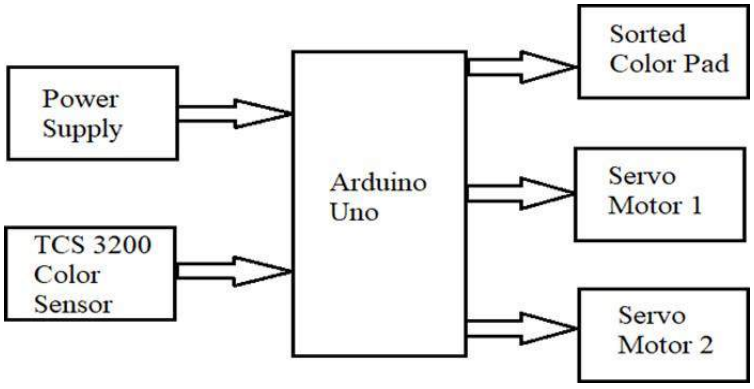
Index Terms— Color sorting, Conveyor belt, TCS3200 color sensor, ARDUINO UNO, Servomotors

Introduction

In the cutting-edge-day situation of aggressive production in business area overall performance of producing holds the crucial element for achievement. It's miles critical to enhance production pace, decrease the labour rate and decrease the breakdown time of manufacturing gadget. Merchandise ought to be look after in severa tiers of producing and guide sorting is time ingesting and labour extensive. This paper discusses approximately the automated sorting device which allows the sorting mechanism to type primarily based totally on the shadeation. For sensing TCS3200 shadeation sensor has been used. With the resource of analyzing the frequency of the output of the sensor, colour based surely sorting is completed. Layout of a modern task known as object sorting machine by recognizing the best of a type sun goggles of the object has been chief intention of the challenge. Accumulating the gadgets from the one that hops and distributes the ones gadgets to their correct place primarily based totally on their shadeation even they may be precise in shadeation. Many artwork environments are not appropriate for guide sorting and some regions are volatile for human beings to artwork on. Consequently to keep away from the risky work, time intake and tough artwork seize 22 situation. This prototype is constructed as a easy virtual devices like microcontroller for processing, Servo cars for moves and shadeation sensor for spotting unique coloured devices.

Methodology

Block Diagram of proposed methodology is given below nFig.1.



International Journal of
Robotics and Automation

Volume 8, Issue 2, 2022
DOI (Journal): 10.37628/IJRA

http://mechanical.journalspub.info/index.php?journal=IJoA&page=index

Research IJRA

Designing and Implementation of Weedinator: The Agribot

Dipali Jadhav[1], Kirti Shamarav Bhosale[2], Aishwarya Dnyandev Taware[3], Komal Ananda Palande[4,*], Rituja Pradip Nimbalkar[5]

Abstract

Herbicides are often sprayed widely across the yard as part of a normal herbicide control method. Herbicides may release chemical residue that is bad on soil and plants if they are used inappropriately and persistently. When the use of image processing on farm for targeted farming in the detection procedure of handling weeds grows fascinating there are still some problems with computer dimensions and power expenditure. One minicomputer that is cheaper and uses relatively little electricity is the Raspberry Pi, or Raspberry Pi. Processing pictures and weed dimension-fractal processing using Open CV library and C language programming can be performed using a desktop computer with the gratis and open-source Linux operating system. The image with a dimension size of 128 × 128 pixels delivers the best fractal compute time in this study. Four milliseconds or so about. The Raspberry Pi is 0.04 times faster than a personal computer on average. With regard with operating a personal computer, owning a Raspberry Pi is simpler and uses fewer watts of electricity.

Keywords : Weeds Detection, Computer Vision, Fractal, Raspberry Pi

INTRODUCTION

The motive of this work Weedinator is to present an overview on a new combined methodology for the efficient improvement in productivity as well as increasing the efficiency of the agricultural weeding operation with the help of advanced technology, image processing concepts, other tools & techniques of Electronics engineering. Which are one of the most influential & most effective methodologies for atomization of the existing system or technology associated with the working process in order to make process leaner, sustainable and eco-friendly. weeding robot hold promise toward the automation of hand operated weed task. Robotic technology reduce current dependency on labors or weedicides for particular weeding operation. Technology helps to reduce energy crisis in India. The integration of technology with agriculture has been the most significant way of generating renewable energy on the farm. The renewable resources have an enormous potential for agriculture industries. Farmers should be supported with subsidies to use renewable energy technology. Traditionally, elimination of weeds done by humans with the help of mechanical tools like hand trowel and grub hoe. Line sowing method have advantage of inter-culturing process. Crops which having space between two rows that can take advantage of proposed Weeding Robot [1].

In the agricultural world, much attention has been paid to large, low-cost machines operating in large open fields that grow only single crops. There is definitely an attack on the farming model where small farmers grow "organic" vegetables on small farms with regard to the environment and wildlife. Weeder-An autonomous agricultural robot that can

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Received Date: April 07, 2023
Accepted Date: April 12, 2023
Published Date: April 20, 2023

Citation: Dipali Jadhav, Kirti Shamarav Bhosale, Aishwarya Dnyandev Taware, Komal Ananda Palande, Rituja Pradip Nimbalkar. Designing and Implementation of Weedinator: The Agribot. International Journal of Robotics and Automation. 2022; 8(2): 37–43p.

Journals Pub

International Journal of
Robotics and Automation

Volume 8, Issue 2, 2022
DOI (Journal): 10.37628/IJRA

http://mechanical.journalspub.info/index.php?journal=IJoA&page=index

Research IJRA

Designing and Implementation of Weedinator: The Agribot

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In the agricultural world, much attention has been paid to large, low-cost machines operating in large open fields that grow only single crops. There is definitely an attack on the farming model where small farmers grow "organic" vegetables on small farms with regard to the environment and

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Received Date: April 07, 2023
Accepted Date: April 12, 2023
Published Date: April 20, 2023

Citation: Dipali Jadhav, Kirti Shamarav Bhosale, Aishwarya Dnyandev Taware, Komal Ananda Palande, Rituja Pradip Nimbalkar. Designing and Implementation of Weedinator: The Agribot. International Journal of Robotics and Automation. 2022; 8(2): 37–43p.

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

RASPBERRY PI BASED VEHICLE STARTER USING FACE DETECTION

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A B S T R A C T

The aim of this undertaking is to apply the Raspberry Pi for creating a facial recognition device for vehicle get admission to control. For future technology automobiles, this initiative adds state of the art safety measures. For the expected superior device, the Raspberry Pi will function a command module. Only legal and registered humans are allowed to function the auto because of the sturdy safety device. Generally secret is used to release and begin a vehicle.

Keywords*: Raspberry Pi, Camera Module, Alcohol Sensor, Solenoid Switch*

1. INTRODUCTION

In this contemporary time several incident takes region like robbery, stealing unwanted the front takes place abruptly. So the protection does subjects in this each day life. People always live busy in their normal artwork moreover wants to ensure their safety of their cherished things. Sometimes they forget about approximatly to the look after their important things (keys, wallet, credit score rating gambling playing cards etc). Without the ones, they are now no longer capable of get proper of access to their home or any location they need. Traditional safety tool require the character a key, a safety password, an RFID card, or ID card to have get proper of access to to the tool. However, the ones safety systems have deficiencies example, they will be forgotten or stolen from unauthorized people. As the result, there can also additionally be need to increase software program application that guarantees a higher safety level is a template. One of the precise capabilities of our thoughts that it could anticipate best in pictures now not in words. Once you may forget about approximately to keep your Car's key but you will in no manner forget about approximately to hold a face with you. God has given each person a very precise face. Face is the most important part of our body, just so it could reflect many emotions of a character. From a long 365 days ago, we are the use of non-residing thing (smart gambling playing cards, plastic gambling playing cards, PINS, tokens, keys) for authentication and to get provide get proper of access to in constrained areas like ISRO, NASA, and DRDO . There are sorts of biometric physiological characteristics (like face, fingerprint, finger geometry, hand geometry, palm, iris, ear and voice) and behavioral characteristics (like gait, signature and keystroke dynamics). Sometimes your behavioral of inclinations also can moreover changes because of the illness, fear, hunger etc. Face detection and recognition tool is more cheap, simple, accurate and non-intrusive method as examine to distinctive biometrics. The tool will fall into instructions as face detection (1:1) and face recognition(1:N).In the face detection we must classify among face in the place of non face location even as in recognition method we must examine that single face picture graph with multiple pictures from the input picture graph. In This artwork uses BCM2835 processor, popularly referred to as Raspberry pi Board. The center of the board is the above processor. It is a RISC processor based mostly on ARM11. The board has precise capabilities like virtual camera interface and make contact with show display screen that make it suitable for real time picture graph processing Open cv consists of huge amount of constructed in functions for picture graph processing. It is beneath Neath BSD license and therefore libraries are free of proprietary cost. The full- fledged library functions simplify the complex mathematical operations.

2. METHODOLOGY

Block Diagram of proposed methodology is given below in Fig. 1.

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International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Color Sorting Machin Using Ardino Uno

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ABSTRACT

Sorting of object is an essential mechanical process in which difficult work is quite required. Chronic manual arranging makes consistency troubles. Machines can perform mainly dreary assignments superior to human beings. Laborer exhaustion on sequential manufacturing structures can result in decreased execution, and purpose troubles in retaining up object fine. A employee who has been appearing research undertaking over and over may additionally in the end forget about to recognize the color of item, but a machine in no way. On this paper a compact records close to arranging of articles based totally totally on shading has been implemented making use of TCS3200 shading sensor with SERVOMOTORS associated with AURDINO UNO.

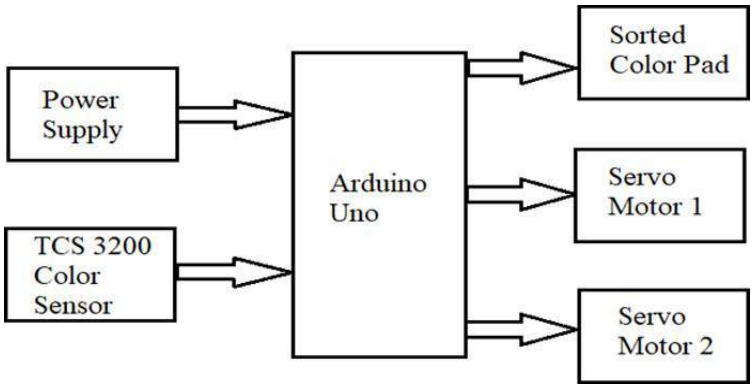
Index Terms— Color sorting, Conveyor belt, TCS3200 color sensor, ARDUINO UNO, Servomotors

Introduction

In the cutting-edge-day situation of aggressive production in business area overall performance of producing holds the crucial element for achievement. It's miles critical to enhance production pace, decrease the labour rate and decrease the breakdown time of manufacturing gadget. Merchandise ought to be look after in severa tiers of producing and guide sorting is time ingesting and labour extensive. This paper discusses approximately the automated sorting device which allows the sorting mechanism to type primarily based totally on the shadeation. For sensing TCS3200 shadeation sensor has been used. With the resource of analyzing the frequency of the output of the sensor, colour based surely sorting is completed. Layout of a modern task known as object sorting machine by recognizing the best of a type sun goggles of the object has been chief intention of the challenge. Accumulating the gadgets from the one that hops and distributes the ones gadgets to their correct place primarily based totally on their shadeation even they may be precise in shadeation. Many artwork environments are not appropriate for guide sorting and some regions are volatile for human beings to artwork on. Consequently to keep away from the risky work, time intake and tough artwork seize 22 situation. This prototype is constructed as a easy virtual devices like microcontroller for processing, Servo cars for moves and shadeation sensor for spotting unique coloured devices.

Methodology

Block Diagram of proposed methodology is given below nFig.1.



International Journal of Research Publication and Reviews, Vol 3, no 5, pp 3269-3273, May 2022

WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

DESIGN & MODIFICATION OF TACKLE

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ABSTRACT

The practice of lifting large and heavy loads by the use of mechanical block and tackle dates back to the Sumerians of Mesopotamia in 1500 BCE. Later, human, animal or water powered capstans or windlasses paved path to the modern age lifting systems. All these systems used a counterweight that employed just enough power required to raise the weight of the load. Modern age lifting systems such as electric chain hoists and pneumatic air balancers are commonplace at warehouses and manufacturing plants which ease material movement. Most manufacturing facilities use air hoists with a hook or an outer gripping tackle to securely lift and move heavy components. An outer gripping tackle however poses a problem when working with space constraints i.e., when components are to be moved and stacked tightly on a pallet or inside a box. The aim is to design and develop a hoist system with an inner clamping tackle controlled by a solenoid valve which both reduces cycle time and increases operator efficiency.

Index Terms— Air Balancer, Inner clamping tackle, Outer clamping tackle, Solenoid valve.

1. Introduction

Balancers are a time and money-saving tool assist device used when performing repetitive high-cycle tasks in a work cell environment. They are a simple and cost-effective alternative to manual lifting. Balancers use either spring or pneumatic air mechanisms to create a zero-gravity movement of tools or materials. Balancers manipulate suspended objects at the pace of the operator's movements and when used in conjunction with jibs and workstation cranes efficiently handle all types of tools and parts at high speeds. If the load changes (i.e., a different tool is used in the work cell) balancers are easily adjusted to accommodate.

A pneumatic system is a system that uses compressed air to transmit and control energy. In a pneumatic control system, energy is stored in a potential state under the form of compressed air. Working energy (kinetic energy and pressure) results in a pneumatic system when the compressed air is allowed to expand. Working energy transmitted pneumatically must be directed and under complete control at all times. One of the advantages of transmitting energy pneumatically is that energy can be controlled relatively easily by using valves. In pneumatic systems compressor is used as the power source to raise the pressure of the air to the required level quite slowly. The operating pressure in pneumatic systems is around 6 to 8 bar.

2. Problem statement

Fig : Outer side tackle

In existing air balancer tackle outer side of tackle causes difficulties for loading & unloading flanges. Because of heavy weight of tackle as well as outer side tackle is not suitable for loading and unloading of flange in box.

Fabrication of Road Cleaner Machine Model

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Abstract- *The purpose of this project is to clean the road in colleges, hospitals, auditoriums, malls and workshops. The aim of this project work is to design and develop process for cleaning the road. It is very useful for cleaning the road and ground. In modern days interior decorations are becoming an important in our life cleaning of road is very important for our health and the road cleaning machine reduces the effort required for cleaning. Hence this project is very useful in our day to day life. It is very simple in construction and easy to operate and little bit cheap, anybody can operate this machine easily. The road cleaning machine consists of, broom and for reducing the cleaning time. The overall cost of this machine is also cheap. Such type of machines is widely used for this purpose but they are working under different principles and the cost is very high. In recent years, floor cleaning machines are getting more popular for cleaning large area in minimum time. However in India, which is a developing country requires large type of such machines to satisfy the cleaning needs.*

Keywords- Roadcleaner, road cleaning,etc

I. INTRODUCTION

Cleaning machine is very much useful in cleaning around us like road and ground and our college's campus and outside ground and public place etc. In modern days interior as well as outside cleaning are becoming an important role in our life. Cleaning of waste is a very important one for our health and reduces the man power requirement. Many of road cleaning machines are available but we developed machine is very simple in construction and easy to operate. Anybody can operate this machine easily. Hence it is very useful in cleaning the cricket ground, any large area space. The time taken for cleaning is very less and the cost is also very less. Maintenance cost is less. Much type of machines is widely used for this purpose. In our project we have made the machine to operate in a fully mechanical way with a little amount of electrical components. The Floor cleaner is of very simple construction and is very easy to operate; anyone can operate it without any prior training of any sorts with safety. Cleaning is essential need of this generation. Basically in colleges ground cricket ground and road for cleaning regularly different rotary motion on the floor which cleans the dirt or dust. The remaining water on the floor is wiping by the wiper present in end of the cleaning machine.

Now the project mainly concentrates on designing a suitable operating system. To maintain simplicity and economy in the design the locally fabricated unit has been used.

Our project achieves higher safety, reduces human effort, increases the efficiency, reduces the work load, reduces the fatigue of workers and reduces maintenance cost

II. PROBLEM STATEMENT

During the manual cleaning operation some dust and dirt particle may remain on the floor and due to the action of air the dirt and dust particle transfer from one surface to another surface which create the problems during cleaning which tends to increase manual effort. Due to which desire cleaning of the surface not gain and because of that it takes more time.

During the rainy season the muddy water are dump on the corner of the wall with the help of manual cleaning it cannot possible to remove all the water from the surface of the floor which creates sleepy surface and which may increase the chances of accidents also the water which remains on the corridor enter into the rooms. Due to uneven surface of the corridor or floor during the wet cleaning of the surface desired cleaning not obtained and backflow of the water occurs which tends to increase manual effort and it is difficult to clean uneven surface of the floor and takes more time for cleaning of the surface

III. OBJECTIVES

1. To fabricate a road cleaning machine that helps in easy and quick cleaning of roads by using bevel gear mechanism.
2. To provide the fast and effective alternative method for road cleaning than conventional cleaning.
3. To reduce human efforts and time using machine.
4. To reduce the cost anyone can use and easy to operate.
5. To remove grit and sand which scratch and wear down the surface of road.

Quasigroups and Related Systems 30 (2022), 169 – 180

https://doi.org/10.56415/qrs.v30.15

On irreducible pseudo symmetric ideals of a partially ordered ternary semigroup

Dattatray Shinde and Machchhindra Gophane

Abstract. In this paper, the concepts of irreducible and strongly irreducible pseudo symmetric ideals in a partially ordered ternary semigroup are introduced. We also studied some interesting properties of irreducible and strongly irreducible pseudo symmetric ideals of a partially ordered ternary semigroup and prove that the space of strongly irreducible pseudo symmetric ideals of a partially ordered ternary semigroup is topologized.

1. Introduction

In 1932, D. H. Lehmer [7] studied some ternary algebraic systems called triplex that appear to be commutative ternary groups. The idea of ternary semigroups was known to Banach. He showed through an example, that there exists a ternary semigroup which cannot be reduced to an ordinary semigroup. Hewitt and Zuckerman described in [3] the method of construction of ternary semigroups from binary and described various connections between such semigroups.

Ternary semigroups are a special case of n-ary (polyadic) semigroups. So many results on ternary semigroups has an analogous version for n-ary semigroups and many results on ternary semigroups is a consequence of results proved for n-ary semigroups. For example, F. M. Sioson proved in [10] some results on ideals in n-ary semigroups, next some results on ideals in ternary semigroups [9]. Also characterization of regular ternary semigroups by ideals can be deduced from general results proved in [1] for n-ary semigroups..

M. Shabir and M. Bano [8] introduced the notion of prime, semiprime and strongly prime bi-ideals in ternary semigroups and studied the space of strongly prime bi-ideals is topologized. A. Iampan [4, 5] invented the concept of ordered ternary semigroups which is the generalization of the concept of ordered semigroup as well as the concept of ternary semigroup. In [11], the ideal theory of a partially ordered ternary semigroups is introduced. The notions of complete prime ideals, prime ideals, complete semiprime ideals, semiprime ideals of po ternary semigroups is defined in [12]. The notion of semipseudo symmetric ideals and pseudo symmetric ideals of partially ordered ternary semigroups is introduced in [6].

2010 Mathematics Subject Classification: 20M12, 20N99, 06F99.

Keywords: partially ordered ternary semigroup, pseudo symmetric ideal, prime pseudo symmetric ideal, irreducible and strongly irreducible pseudo symmetric ideal.