UCSI University

ICSDI
INSTITUTE OF COMPUTER SCIENCE AND DIGITAL INNOVATION

Designing and Implementing Final Year Project

- with Success

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Foreword by
DIRECTOR

Associate Professor Dr Keoy Kay Hooi (Alan)
Director
Institute of Computer Science and Digital Innovation (ICSDI)

Welcome to the Institute of Computer Science and Digital Innovation (ICSDI), UCSI University.

The Final Year Project (FYP) is compulsory for the diploma and undergraduate programmes at ICSDI. This Final Year Project Handbook is designed to provide students with a comprehensive guide for planning, implementing, and documenting project work in accordance with the requirements of the relevant academic programme accreditation bodies.

The goal of FYP is to provide students with the opportunity and exposure to apply and integrate the theoretical knowledge and principles taught in the programme, as well as to solve problems creatively in their final year project.

To maintain the high quality of education at UCSI, we have continuously provided our students with advanced skills, cutting-edge software systems, and industry-relevant teachings by ICT professionals. FYP allows students to demonstrate independence and originality while also planning and organising a project over a set period of time.

I wish to congratulate Assistant Professor Ts. Dr. Kasthuri Subaramaniam, FYP coordinator, and all ICSDI supervisors for their effort, dedication, and hard work in supervising the students and producing high quality projects. I hope that this FYP handbook will be set as an example and standard for many more FYP handbooks to be produced and will contribute towards producing quality research work by the students and excellent supervisory skills by the academic staff of the Institute.

Enhancement of Low-light Image

Tan Wan Yin, Kasthuri Subaramaniam, Abdul Samad Bin Shibghatullah

Introduction

Low-light image can be found in digital image that is taken under a dark condition and these images are usually lacking as the objects captured are unclear. Researchers are aware of the importance of enhancing a low-light image and various enhancement techniques were introduced. However, color distortion and loss of image details are the common problems that were faced by these low-light image enhancement methods. This research introduces low-light image enhancement method that applied the concept of homomorphic filtering, unsharp masking and gamma correction. The low-light image input is processed with homomorphic filtering where the parameters values of the Gaussian high pass filter is available for customization has been applied and Fast Fourier Transform (FFT) is used so that the time taken for the process are cut down. Subsequently, to sharpen the image, unsharp masking is applied.

Objectives

1. To propose a low-light image enhancement method.
2. To compare existing enhancement techniques with the proposed method.
3. To evaluate the proposed method on low-light images using objective evaluation.

Methods

Several existing low-light image enhancement methods had been observed and the problems of most existing enhancement methods had been listed out. Later, the main scope of the project was put together, following with the chosen method on creating the project, Rapid Application Development (RAD) method. RAD method was chosen because of its ability of identifying problems and making changes more easily, its reusable prototypes as well as its flexibility and adaptability. Next, literature reviews were done to collect qualitative data on the existing technologies that were used to enhance low-light images. The reason of this step was to have an idea on how the available methods that were used to enhance a low-light image, and it gave a clearer picture on what approach should be applied to create the low-light image enhancement method.

Results

According to the results, the proposed method has proven to best the LIME method and DYNENH method in terms of having highest FSIMc, FSIM and SSIM among them and lowest MSE, showing its capability in preserving details of the image. Besides that, the proposed method has the lowest LOE and highest VIF when compared to others, proving that it can enhance low-light images and produce a better image with lowest value of lightness distortion and highest accuracy compared to the other two methods. The proposed method can enhance low-light images while minimizing the problem of color distortion and loss of image details of a low-light image. In addition, the color and brightness of the enhanced image are like the ground truth.

Conclusion

The proposed method in this research has successfully enhanced a low-light image and produce an enhanced image with minimal color distortion and with clear details. The proposed low-light image enhancement method includes three processes: homomorphic filtering, unsharp masking and gamma correction. The enhanced results showed that the proposed method have better visual quality compared to other methods. This proves that the proposed method has the lowest and colour distortion and is the best in preserving the details of image, thus

outperforming the other two low-light image enhancement methods. As image enhancement becoming more important in digital images, there will be a lot of improvements to be made on the proposed method before it can be applied in daily lives. The future work will be focused on improving the method so that it can dehaze and reduce the noise in low-light images, these functionalities are important as low-light images might be captured in a hazy situation, for instant a hazy day, and a noisy low-light image should be considered. Another thing to work on is to upgrade the method so that it can be applied in real time applications. The method had a drawback of unable to utilize the best high pass filter for the low-light image since the values of parameters for the high pass filter must be adjusted manually for some images.

Developing A Pandemic Information System: COVID-19

Wang PuYu, Raenu Kolandaisamy, Thong Chee Ling

Introduction

The sudden outbreak of the novel coronavirus pneumonia (COVID-19), involving a large number of people, a large scale, and a wide range, exceeds the ability of individual prevention and control, and seriously threatens the health and life safety of the people. Epidemic prevention and control have become the top priority. A key factor for success is the accelerated development and strengthening of epidemiological information management systems. In response to the outbreak of the epidemic, it is necessary to dynamically adjust the prevention and control measures and plans in a timely manner. The main function of the information system is to make the investigation and isolation work efficient and accurate, and achieve the purpose of effective management and control of early detection and early detection. Control. This is especially important during the primary to secondary stages of an outbreak when medical experts are still in the process of researching and understanding COVID-19. Information systems are particularly important.

Objectives

1. To study the current outbreak information systems.
2. To design an information management system for the government.
3. To develop a prototype information management system for the government.
4. To evaluate the usefulness of the system by the student.

Methods

This epidemic prevention and control management system is based on the concept of making full use of current technology and technology and uses IT technology to manage community epidemic prevention and control. Source isolation measures, at the same time, speed up the diagnosis of suspected cases and the management of close contacts, summarize the epidemic prevention and control situation, and strengthen the epidemic prevention and control of returnees. The paper adopts the method of illustration and text, and through the comparison and study with the same type of projects and the improvement of the network-assisted interface, the realization of the epidemic prevention and control management system is obtained. This system is developed based on the Eclipse platform, adopts the SSM framework, uses the java programming language, and the MySQL database realizes the connection with the database, thereby realizing

the epidemic prevention and control management system.

Results

Based on survey questions that have been distributed to random students at UCSI University. It can be concluded that most of the respondents are willing to use the epidemic information management system. According to the responses, most of the respondents have experienced problems with no specific and real information flow in home control. The project will bring great help to the government's community-based or area-based management because 90% of the respondents are willing to use this system to help manage their activities and information comprehensively through information uploading.

Conclusion

The epidemic information management system provides customers with a real, easy-to-use system that basically meets my initial development goals and guidelines, as well as the needs of users during the epidemic. My development is based on SSM framework technology, MySQL database, HTML code, and other technologies. Each of these technologies has advantages. A thorough understanding of these techniques is essential. Using these advantages creates a

system that is functional, reliable, and meets all the needs of people. A thorough analysis of the system and the requirements of each module followed by a centralized design approach. Finally, after testing, the system can function normally. Completed the design of the epidemic information management system.

EasyKeepers: Developing Mobile Application for Personal Bookkeeping System

Cui Guangyang, Abdul Samad Bin Shibghatullah, Javid Iqbal Thirupattur

Introduction

Nowadays, money plays an increasingly important role in the commodity society. In daily life, people often want to find out how much they earn, how much they spend, where they spend it, how much money they need to maintain a normal daily life, and how much money they have left after subtracting expenses. One way to solve these problems is through bookkeeping. In recent years, more and more people are finding the need to keep track of their personal expenses by keeping track of them. One of the reasons for keeping accounts is due to their lack of self-control in monetary spending [1]. One of the solutions is to keep accounts to understand the details of their income and expenses, and then analyze their income and expenses so that they can identify and correct their unreasonable spending habits in time.

Objectives

1. To study and review of existing bookkeeping systems and compare it to discover the advantages and limitations. It helps the developer to have better understandings regarding the existing application.
2. To enhance the proposed personal bookkeeping system to improve user's experience based on the limitations discovered. It helps to increase the user's satisfaction for using the proposed application
3. To design and develop a personal bookkeeping system with all the requirement meet that are stated. It helps the proposed application to meet the user's expectation.
4. To evaluate and test the proposed personal bookkeeping system with other users to make sure that all the features are working well. It helps to determine all the bugs and defects that can be improved in the proposed application.

Methods

The development methodology used in this study is SDLC (Software Development Life Cycle) Waterfall Methodology. The SDLC Waterfall Model was chosen because SDLC allows developers to analyse requirements and helps developers to produce the highest quality software products in the shortest time

and at the lowest cost. In addition, a random questionnaire was also used in this study, and the sample consisted of 100 respondents from different countries and regions. By collecting a large amount of information to help developers study the needs and desires of users and to determine the status of the application to be developed, which is essential for the development of the system.

Results

The survey results show that the vast majority of respondents have the habit of keeping accounts, but they do not bookkeep every day. The reason may be dissatisfaction with the current bookkeeping method or dissatisfaction with the current bookkeeping app. The vast majority of respondents said they use bookkeeping apps for bookkeeping. In addition, the survey results show that the vast majority of respondents expressed a desire for a tool that can analyze personal finances while keeping books. Since users are dissatisfied with the current bookkeeping method or bookkeeping app, they have high expectations for this new bookkeeping app and are happy to recommend it to the surrounding people.

Conclusion

A systematic review and study of existing applications and systems and questionnaires was conducted to identify existing questions and analyses. The EasyKeepers application is designed to meet all goals and improve all existing problems. The proposed application has been developed and implemented using the Flutter SDK and is compatible with Android-based mobile devices. Although it is not perfect, it has successfully achieved all goals and improved the user experience according to the feedback from the participants who participated in the user acceptance testing. The proposed application can be further developed and enhanced in the future.

Design and Development of Gami-ccount– a Gamified App Solution to Increase Undergraduates' Learning Engagement in the Accounting subject

Lim Hong Yong, Kasthuri Subaramaniam, Abdul Samad Bin Shibghatullah

Introduction

The path to achieving a happy and enjoyable learning experience is far from being an easy one. Students nowadays are getting impatient, constantly looking for instant results without intending to put in hard endeavours, owing to the modernization of information technology. As a result, lack of effort combining with isolation can cause the average learner to deteriorate in terms of learning and revisioning accounting knowledge attained during lecture hours. Although COVID-19 has disrupted the teaching system of ACCA-level accounting and the overall students' learning engagement, there is a window of opportunity for digital innovators to introduce a myriad of digital learning solutions. However, long, and strenuous hours of online learning have its disadvantages as well and students can easily lose their attention along the process. In that sense, gamification can be an alternate pedagogic approach by introducing and infusing fun and interesting elements to the learning process or activity of accounting studies, triggering, and inducing positive psychological effects on the

participating individuals for completing the tasks in a stress-free yet effective manner.

Objectives

1. To identify the strengths and weaknesses of current available solutions to Gamified learning process of the accounting subject in the market
2. To assess the risks associated with gamifying the process of learning Accounting amongst University Students
3. To gather user feedbacks and identify the crucial functionalities and features in making the Gamification process a success
4. To develop a Gamified system solution that is effective in a sense that it enhances the learning experience of accounting amongst undergraduates.

Methods

The Modified Waterfall Software Development Life Cycle (SDLC) will be used in the project as it provides higher flexibility and larger margin of allowable errors, compared to the traditional waterfall method. This allows the developer to be able to identify and attend to errors at an early stage without compromising much of the system operations and modules. In total, 81 respondents took part in

the requirements survey comprising of 21 questions in total. As for the user acceptance test, 35 respondents who have has tested the prototype were asked to complete the survey of 10 questions measuring various aspects of the prototype.

Results

Based on the results from the user acceptance test, most of the respondents embrace the use of the gamification solution. It is worth mentioning that the respondents also find conventional learning and revisioning methods of accounting to be dull and ineffective at times, hence the use of the system could greatly influence the experience in a positive manner. Out of 35 respondents, 24 respondents would recommend the system to friends and family who are facing the similar situation, and 29 agreed that the system is able to meet the project objectives.

Conclusion

The first objective is completed upon performing an in-depth study and comparison with similar existing solutions in the market. The second objective is fulfilled via identifying the effects originating from poor design concept of gamification and the ethical issues that stem from inappropriate use of

gamification. The third objective is achieved through performing a requirements survey and analysis, supported by intensive literature review of similar scientific works and real-life case examples. The final objective is achieved by successfully developing and designing a system incorporated with gamification elements that is able to gain positive recognition from undergraduate users in enhancing the learning experience of accounting.

Develop a University Course Timetable Web-Based Application for Institute of Computer Science & Digital Innovation

Qin Lei, Kurunathan Ratnavelu, Raenu Kolandaisamy

Introduction

The university scheduling problem is divided into exam scheduling and course scheduling problem (UCTP), in the university timetable, the course selected by the student is allocated to a given number of rooms and time within a certain period. College timetables are important to college students and college staff who need to schedule classes and class locations before the start of the semester and integrate the information into students' timetables. However, there is a course conflict in the timetable as students may wish to adjust courses at the beginning of the semester. At present, college faculty members need to manually arrange courses to resolve course conflicts, and faculty members need to spend energy to meet hard constraints as much as possible. and soft constraints, where hard constraints must be satisfied. Teaching staff arrange courses through the accumulated experience of previous course arrangements, and sometimes there are some unresolved contradictions. Students and staff have spent a certain amount of time and effort in adjusting the timetable. The proposal addresses this

problem by developing a timetable system specifically for ICSDI, an automated timetable that reduces time spent by students and staff and increases efficiency. The timetable system to be developed in this proposal can satisfy hard constraints, try to satisfy soft constraints, and can automatically generate timetables by inputting relevant course information by faculty members.

Objectives

1. To gather/collect requirements from students and lecturers.
2. To design a timetable system.
3. To develop a timetable system.

Methods

This study will use the software life cycle waterfall model for web application development. This model has a total of six stages of requirements collection and analysis, design, implementation, testing, deployment, and maintenance. The software development is carried out in sequence according to these six stages, and the cycle is gradual. The waterfall model is beneficial for developers to organize and manage the software development process, thereby improving the quality and efficiency of software project development. Follow each stage of the

SDLC development process to ensure that the deliverables are completed within the stipulated time.

Results

The questionnaire survey was conducted using a mixed method, and the following is a summary of the survey results. Based on this survey on course timetables, ICSDI students' opinions and views on current university course timetables were obtained. Students feel that the existing course schedule is flawed. As a result, the existing course schedules have crashed classes, and professional departments need a certain amount of time to adjust the crashed classes. Students need to keep track of the changes in the curriculum timetable to be able to keep abreast of the changes in the curriculum. At the same time, the university's course schedule at the beginning of the semester requires a certain amount of time for students to enter or wait until the next day to enter. These students use mobile phones or laptops to view the class schedule, but the class schedule is more suitable for viewing on the laptop, and it is more difficult to view the class schedule on the mobile terminal. The curriculum should also be designed with students viewing the curriculum on their mobile phones in mind.

Conclusion

Regarding manual course scheduling and automatic course scheduling, manual scheduling consumes more resources and energy, and it is not suitable for ICSDI to schedule courses for majors. However, automatic class scheduling needs to deal with the problem of class collision, and students should not be delayed for too long to adjust the course, otherwise the classes of students and professors will be affected. A good class schedule system can save more time for ICSDI, there is also a lot of research on class timetables, although there is no way to find a class scheduling method that can completely avoid class bumps, but university departments can reduce the time to deal with class bumps.

Development of an IOS Based Split Bill Mobile Application-Divide

Jason Erniody,, Shayla Islam, Ghassan Saleh Hussein Al-Dharhani

Introduction

This paper represents the proposed solution for developing and comparing existing apps for hoping to find a solution or improvement to any issues that are founded in three different research papers. The system was developed on apple IOS application of split bill for people who wish to split their bills by scanning the receipt by using the technology called OCR or also known as Optical Character Reader for seamlessly dividing the fees of each people. Not only for scanning receipts, but it also acts as a middleman or a mobile wallet for transferring money to people seamlessly without having to worry to check for the bank code to transfer from one bank to another different bank to transfer. Often each individual in the group is responsible for covering their expenses but calculating for each share of total expenses can be daunting, inefficient, and prone to miscalculation. Not only that but also some individuals may end up paying more or paying less for what they're getting for and not only that but also the complication of telling another user via a third-party messaging app and using different mobile banking app for that individual to transfer or receive the money.

For the comparisons of different existing apps and different techniques, so for the comparison, we will be comparing with Mobile Bookkeeper, Separate Bills, and the journal paper of Software application of bill splitting.

Objectives

1. To study and compare existing similar applications to find strengths and weaknesses.
2. To develop the proposed IOS application:
3. To evaluate the performance of the developed IOS mobile application by conducting survey on the user experiences by conducting survey on the user experiences after it is completed and compare it with the existing application.

Methods

The method of developing this system is by using the Agile Development method. The reason why we chose the Agile Development because of an rapid and accurate phases and deliverables which is a perfect methodology for developing an mobile application. As for the method of information gathering for the

research is by using an online survey to gather and collect the necessary data and also finding the issues of the current problem of this chosen topic.

Results

According to the pre-development survey, 83.5% of respondents agreed that developing this mobile application could reduce the time wasting to a minimum when it comes to splitting bill and tracking down expenses. While the post-development survey, 100% of respondents agreed that the current mobile application is very helpful to those people who are having trouble with splitting bills and tracking down expenses. The two last two questions of the two survey confirmed that most people agree that this mobile application is necessary to be developed for those people who are having troubles with the problem statement above.

Conclusion

In short, developing the mobile application could help people with the current problem, while also ensuring to do a systematic review with the existing mobile application to find the current issues, while also ensuring to find the solution to the current problem or an improvement. Not only that, but also to do more deeper

research about the Agile Development process and also experiencing the development process of an mobile application to those people who are inexperience with it.

A Study on Face Recognition

Jean Leong Ji Ying, Kurunathan Ratnavelu, Raenu Kolandaisamy

Introduction

Human face is very unique as it reveals a person's emotion. By looking at a person's face, it can be identified. For instance, the mood of a person, the gender of a person, etc. In real life without technology all humans are able to understand and remember a person just by looking into their face. We get to recognize a person just by remembering a person's face, hence we are able to identify whether that person is a stranger or someone we know. On the other hand, with the use of technology, people have implemented this concept. With the use of technology people are able to save the image of a person to the system. Biometric systems in face recognition function by collecting biometric data from a person, then identifying features such as eyebrow, the distance of eye, nose, mouth, jaw edge and extract these features of data. After collecting these data, the system will starts to analyze whether the user's biometric measurement has been matched to any of the face data which are already in the system.

Objectives

1. To study current face recognition applications.
2. To study the problem of face recognition faced by society.
3. To study the willingness of society to use biometric systems.
4. To study the biometrics system prefencerce used by the public.

Methods

The data collected for this study is quantitative and qualitative. The major and general aim is to collect respondents' ideas towards face recognition from their perspective. Furthermore, it also collects some data for comparison with fingerprint gesture and face recognition. The research instrument for this study is the survey questionnaire consisting of four sections, demographic background of the respondents, to test the knowledge of the respondents about face recognition, allow the respondent to rate their satisfaction towards face recognition system, fingerprint gesture and iris recognition that they have used or heard in daily life, an open-ended question that requires the respondent to write down some comments towards current face recognition, fingerprint gesture and iris recognition.

Results

Based on the survey question that has been distributed to random people in the society, the data has shown that most of the respondents prefer to use fingerprint gesture instead of face recognition. Additionally, during this Covid-19 pandemic, wearing masks also affects their willingness to use face recognition systems. According to respondents, the major problem they faced was being unable to detect while wearing a mask, spectacles, or changing their hair style. Besides, they feel that even though face recognition is convenient and able to be spotted in our daily life, however it is still immature.

Conclusion

In this study, the data has shown that face recognition is less popular compared to fingerprint gesture which is understandable due to the Covid-19 pandemic. The society is required to wear a face mask to ensure their safety. This has resulted in face recognition being inconvenient as they need to remove the face mask to unlock their phone or to clock in. Compared to fingerprint gesture, it will be more convenient as dirt and grease is easier to remove. Furthermore, regular sanitizer or hand washing is encouraged to the respondents which has reduced the problem of dirty or greasy hands.

Development of a Web-based Secure Student Information Management System

Zhang Jiadong, Raenu Kolandaisamy, Shayla Islam

Introduction

The application of a school information management system is an important measure to further promote the standardization and electronation of student status management, control dropout, and improve the level of compulsory education. In the early days, student information can only be accessed through paper, but now there are web pages, mobile apps, and other forms. Student information management has always been one of the most important parts of daily teaching, a lot of school users excel to record students' basic information which has low efficiency, and for some large schools, counting students is very troublesome. That's why some principals try to find a student information management system that can make it easy. Some of the existing student management systems focus on enrollment, educational administration, and communication with parents. How to integrate well is the key to a higher level of the traditional student information management system.

Objectives

1. To study the existing student management system.
2. To identify the strengths and weaknesses of the current systems.
3. To gather/collect requirements from users.
4. To design a web-based secure student information management system.
5. To develop a web-based secure student information management system.

Methods

The major research problem that developers aim to solve is by collecting data from users. To determine whether users can accept the real-time positioning function and collect their needs and views on the existing management system. The questionnaire method was used because it can quickly collect user data and use Baidu Library and Google academic search-related materials to lay the foundation for the system and use words to write literature.

Results

Based on this survey it can be concluded that most people want a better library management system. Most of the users are between the ages of 18-25 and have

relatively high education. This will help us to promote the mobile library management system. A mobile library management system with a good UI design is required. The mobile library management system will help library management and will greatly facilitate users to borrow and return books and other operations. Borrowing and other operations can be performed regardless of location and time. It will also help libraries better manage book information. This will greatly improve the management efficiency of the library and reduce the management cost of the library.

Conclusion

The application of computers has spread all over the fields of national economy. Computers have come to our work and life, changing us and everything around us. In the past, when schools used to manually process student files, wages and other work and data, there were always some unnecessary errors and problems in the hands, especially in the search, statistics and preservation. Accordingly, using computers to replace manual management is the inevitable trend of the development of information society. The development of student information management system mainly includes the establishment and maintenance of database and the development of application program. It is required to establish

strong data consistency and integrity. The library with good data security requires that the application program has complete functions and is easy to use.

Using Gesture Recognition System Based on Webcam to Control Computer

Liu Jingliang, Kasthuri Subaramaniam, Raenu Kolandaisamy

Introduction

Human-computer interaction (HCI) has gradually become an important part of people's daily life. In general, the focus of human-computer interaction technology has shifted from computers to humans, which means that all technological innovations must be user-friendly, and it is an interactive technology with multiple media formats and multiple modes. They have been widely used in many fields, and gesture recognition is one of them. As one of the most important members of human-computer interaction technology fields. At present, gesture recognition has been applied in smart home, smart wear, entertainment and other fields. However, the expensiveness of most gesture recognition devices and technologies discourages many people. This gesture recognition technology allows people to find an inexpensive alternative to a physical mouse, which allows people to perform all the functions of a physical mouse through gesture recognition.

Objectives

1. To study a gesture recognition method which is suitable for realizing touchless control of computers
2. To design user-friendly gestures for realizing relevant functionality
3. To develop gesture recognition system to control the computer, research algorithms related to computer vision
4. To evaluate the performance and user-friendliness of the virtual mouse system

Methods

In order to obtain project requirements and data collection, this study will use quantitative methods to obtain results. Quantitative methods are methods of obtaining the number of results from the question posed and analyzing the variables of the data to obtain the results. The study will randomly select over 100 respondents around UCSI University based on system requirements and customer preferences. At the conclusion of the survey, general conclusions will be drawn from a large population and the opinions gathered will be highlighted for consideration. Second, the collected data is further analyzed by qualitative methods to get a comprehensive understanding of all the collected detailed data, which will help to better develop the system.

Results

According to the survey, most young people with higher education show a positive attitude towards accepting new things like virtual mice. Also, most of them stated that the frequency of using the mouse in their daily life is really high. Whether it's a wired mouse or a wireless mouse, physical mice can sometimes give them all kinds of annoyances. They also mentioned that the price of physical mice in the market is uneven, the quality is not good, and virtual mice can avoid the option of purchasing a mouse. More importantly, the virtual mouse has not been officially applied in the market, so the development prospect of the virtual mouse is worth looking forward to.

Conclusion

In this research project, a new concept of virtual mouse through gesture recognition technology is proposed, aiming to create a new mouse control scheme. By consulting the relevant literature in the field of gesture recognition technology, the algorithm that conforms to the research of this project is extracted and used to realize this project. Through research and design, this project successfully created a new gesture recognition scheme combining two algorithms and applied the scheme to virtual mouse. After all research and development were completed, researchers and testers tested the functionality of the system and

incorporated the results further into the study. In the end, the prototype achieved almost all the expected functionality. The prototype tries to realize all the basic functions required by humans to control the computer without touching. It is believed that the related gesture recognition technology will be applied in more scenarios in the future, especially during the current COVID-19 epidemic, the algorithm can be applied to computers in public places, through this touchless operation, it will avoid virus cross infection.

Designing a More Convenient Hospital System for the Present - Tabib

He Junfeng, Javid Iqbal Thirupattur, Heshalini Rajagopal @ Ramasamy

Introduction

With the continuous improvement of science and technology, computer science is becoming more and more mature. Its powerful function has been deeply recognized by people. It has entered all fields of human society and is playing an increasingly important role. As a part of computer applicaticomputersing computer to manage patients and doctors has incomparable advantages over manual management, such as rapid retrieval, convenient search, high reliability, large storage capacity, good confidentiality, long service life, low cost, etc. These advantages can greatly improve the efficiency of patient and physical management and are also important conditions for the scientific and standardized management of financial management in medical institutions and the integration with advanced science and technology.A hospital sstraininformation management system is an indispensable management information system for every medical institution to manage the income and expenditure of patients and doctors. Its content is crucial for the managers of medical institutions, so the hospital information management system should be able to provide sufficient

information and fast query means for the managers of every medical institution, which greatly facilitates the reasonable management of the managers of medical institutions.

Objectives

1. Realize the information management of registration, charging, pharmacy, drug store, department and hospital bed within the hospital.
2. Provide daily, monthly and annual reports that record the summary and details of various business decisions within the hospital.
3. Record user information, doctor information, department information, ward information, etc.
4. Record the patient's clinical information, drug allergies, medical records, and others of the patient.

Methods

The main research methods of this topic are literature review and online questionnaire survey. Literature review is to study the relevant data of other similar topics, and then summarize, analyze and sort out the helpful parts of this project, and then summarize the problems and limitations of the current system

in combination with the current research status. The online questionnaire is used to collect user data, which can help provide a lot of theoretical basis for project research. Users' needs can be obtained through a large number of survey data, and then the project can be optimized. The questionnaire will be randomly distributed to users in some hospitals, and the charts generated by the questionnaire can explain users' opinions and suggestions on this project.

Results

Due to the progress of science and technology, some hospital management systems have been put into use in major hospitals. According to the survey, hospital staff and patients are willing to try and use the hospital management system, believing that it is convenient, which can improve their work efficiency and make the operation of the hospital faster. Most of the respondents said that they highly recognized the functions of this system and its coverage was comprehensive. However, for the development of the hospital, the system will also need to be updated according to the needs of the hospital and users.

Conclusion

In a word, this civilization has determined the goal of this research project and will continue to study with this goal. The goal of this project is to develop a convenient, efficient and easy-to-use hospital management application, which runs on the web to help hospitals run better and increase economic benefits and people's happiness. And we have studied the application and conducted a questionnaire survey to find and analyze the existing problems. The original intention of the application design and research is to make the hospital better serve the public and make citizens' lives more convenient. Although this application is not very mature, it basically meets the requirements, achieves all goals, and improves some details of the application according to the acceptance test participated by users, so that users have a better sense of experience. In the future, more information will be collected to further develop and update the application to make it more perfect.

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