QR CODE SCANNER LOCATIONS FOR STAFF AND VISITOR

Miss. B. D. Bhujang[1], Mr. Bhupendrasingh Patil[2], Mr. Akshay Patil[3], Miss. Swati Algat[4], Miss. Snehal Nikam[5]

[1,2,3,4,5]Computer Engineering, Sandip Foundation's Sandip Polytechnic, Nashik, Maharashtra, India.

ABSTRACT

The QR code recognition often faces the challenges of uneven background fluctuations, inadequate illuminations, and distortions due to the improper image acquisition method. This makes the identification of QR codes difficult, and therefore, to deal with this problem, artificial intelligence-based systems came into existence. To improve the recognition rate of QR image codes, this article adopts an improved adaptive median filter algorithm and a QR code distortion correction method based on backpropagation (BP)neural networks. This combination of artificial intelligence algorithms is capable of fitting the distorted QR image into the geometric deformation pattern, and QR code recognition is accomplished. The two-dimensional code distortion is addressed in this study, which was a serious research issue in the existing software systems. The research outcomes obtained after emphasizing on the preprocessing stage of the image revealed that a significant improvement of 14% is observed for the reading rate of QR image code, after processing by the system algorithm in this article. The artificial intelligence algorithm adopted has ascertain effect in improving the recognition rate of the two-dimensional code image.

Keywords: QR Code Scanner, Tracking Software.

1. INTRODUCTION

It is a mobile application for Android platform with QR codes with reading capability that allows the user to readily localize, navigate, and view the map of buildings on their smartphones. QR codes are Two Dimensional codes where data is encoded in optically readable format. QR code will be used all across the building to carry information required for the navigation system. The navigation application in mobile uses the camera to read frames continuously. The location detail from the QR code is used to provide the user his/her current location. The indoor positioning system is based on the application of Wi-Fi access points found abundantly in smartphones and buildings. Wi-Fi's indoor localization system has the least complexity. Thus, the methodology is partitioned into five steps: Indoor map design, selecting implementation technology, indoor localization development, indoor navigation integration and feedback display. Wi-Fi has been improved in terms of decreasing the power consumption and the complexity of design while maintaining the accuracy and speed of the system. In, designing of the indoor map guidance system via the use of portable mobile devices on an indoor campus environment. It is a mobile application for Android platform with NFC and QR codes. NFC technology is used to find the shortest path to the selected destination and QR codes are also used in order to determine the current location of the visitors. The NFC tags and QR codes are distributed with known and readily-accessible positions within the buildings; and the users of the system can then scan these tags to their current location and subsequently be able to access the different navigation features inside the building.

2. METHODOLOGY

Method and analysis which is performed in your research work should be written in this section. A simple strategy to follow is to use keywords from your title in first few sentences.

2.1 User Mobile

The user module tracks location/position using the barcode scanning process. The Barcode present has to be scanned by the user and save the location every time the user navigates to different places according to the time table schedule. The saved location is the data which is used to track the user. It is very helpful in locating the person, especially in big premises. Hence, the use is of real importance and is fulfilled by the barcode scanning mechanism

2.2 Project Scope

This trend will continue to grow in the future. Consumer convenience is a priority for all brands, which boils down to seamless accessibility. Since QR codes make it possible, they're likely to make contactless the norm even in the post-pandemic world.

2.3 Feasibility Study

For all the new systems, the engineering process should act with the feasibility study. The input to the feasibility study is only the description of the system and how it will be used within an organization. The result of the feasibility study should be a report, which recommends whether it is worth carrying with the requirement engineering and the system development process.

2.3.1 Technical Feasibility

The technical feasibility involves financial consideration to accommodate the technical enhancement, with the existing provision of computerization; the work can be completed efficiently. The project is implemented in Android Studio which is user friendly, efficient and error free. The Android Studio which supports any operating system (OS) in which the project was implemented made time such less. The computerized material planning process is to be developed in Android Studio which is free of cost as well as platform Independent.

2.3.2 Financial Feasibility

Economic analysis is the most frequently used method for evaluating the effectiveness of the system. More commonly known as cost analysis, the procedure to determine the benefits and savings that are expected from a system, the labour expenses are reduced. The cost for development of the system is very moderate. The cost of the hardware and software for management is at present economical. The benefits in turn reduce a lot of manual paper work. The development cost in future will be putting the system on its extension.

2.3.3 Time Feasibility

As the project is having a well understandable structure and well understood requirements the team members have understood their role and contribution towards project. The schedule of the project has been decided so that everything goes at decided time. The customer and vendor can operate the system anytime anywhere thus the project is Timely feasible.

2.3.4 Operational Feasibility

All team members have undergone Syllabus consist in Android development and And also Conduct the Industrial training which includes the use of html, css, javascript, bootstrap, php. So every team member can contribute in the development process. Thus the operational requirements of the project are well understood by team members

3. MODELING AND ANALYSIS

he activity diagram visually represents the workflow and dynamic aspects of a project, illustrating the sequential flow of activities and interactions among components to enhance understanding and facilitate efficient project
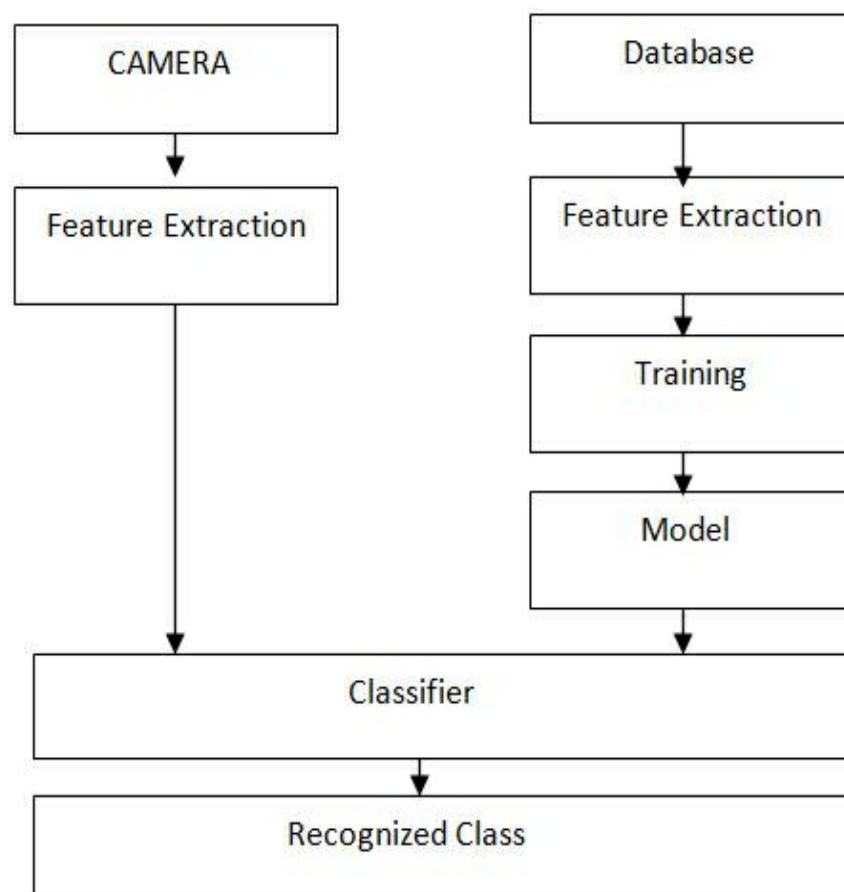

Figure1: Activity Diagram.

4. RESULTS AND DISCUSSION

A use case diagram visually represents how users interact with a system, outlining the system's functionalities and the various ways users can engage with it.
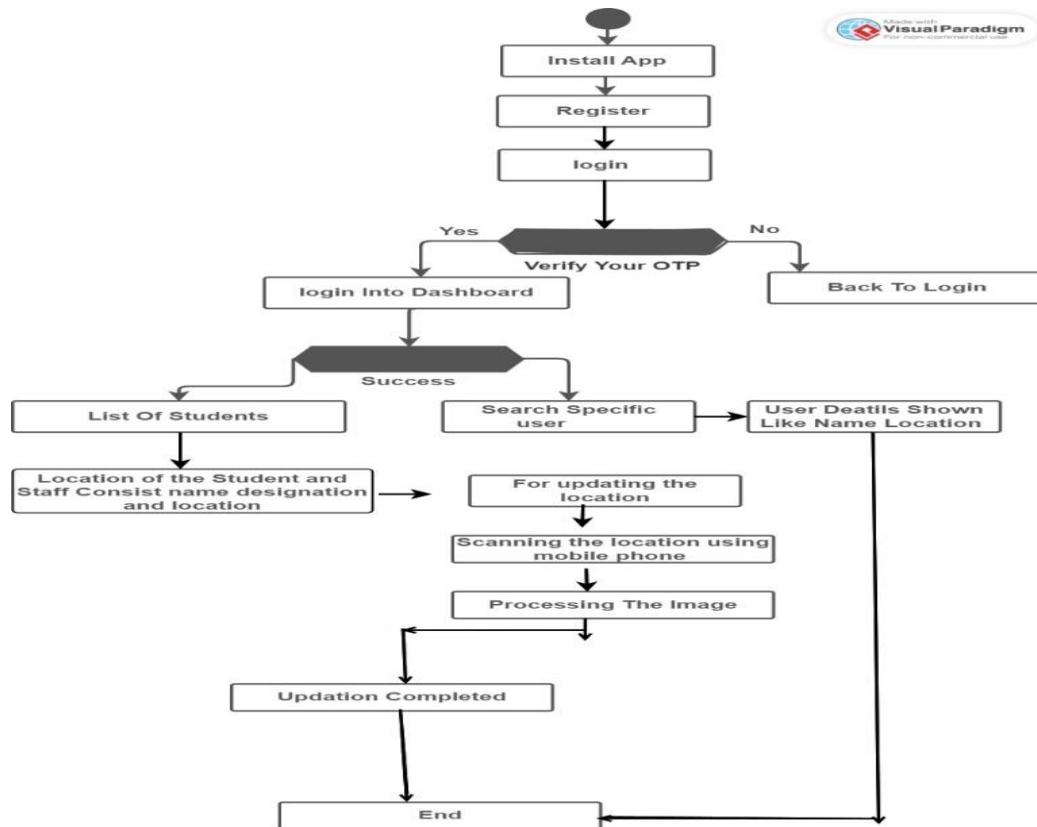

Figure2: Use Case Diagram

5. CONCLUSION

The conclusion is that this approach is cost effective for service providers.Users do not have to make any investments for human positioning systems. Complexity and time to implement is less. There is no additiona configuration which the users have to maintain for the human positioning system. The main aim of this paper is to give the exact location of the user.This article is mainly focused at the identification of QR codes that are more severely distorted, especially those printed on objects that are prone to wrinkles. In this case, the QR code recognition rate is very low or cannot be recognized at all. As an excellent two-dimensional code, the application of QR code in trade-marks is bound to be a major development trend. As a result, it is of great significance to improve the recognition rate of the QR code in special circumstances, and the improvement of the recognition rate can also greatly promote the application of QR codes. Based on standard median filtering and classical adaptive median filtering.

6. REFERENCES

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