



“Survey Paper on COVID Vaccination Detection Using Aadhar QR Code”

Prof. Waghmode P.S¹, Jagtap Apeksha², Madane Sayali³

Prof, Computer Designation, Department, SPCOET Someshwarnagar, Baramati, India¹

Student, Computer Designation, Department, SPCOET Someshwarnagar, Baramati, India²

Student, Computer Designation, Department, SPCOET Someshwarnagar, Baramati, India³

Abstract: Now these days, a QR code is applied in different application streams related to marketing, security, academics etc. Day by day more people are getting aware of this technology and use it accordingly. The popularity of QR code grows rapidly with the growth of smartphone users and thus the QR code is rapidly arriving at high levels of acceptance worldwide. Identification of objects and places in the real world is very important, and QR (2-D printing) code is useful to store identifiers of them. Any camera cell phone device capture function can read content from a barcode tag directly.

Keywords: Machine Learning, Reed Solomon Method, Quick response code(QR), Mobile application scanner, Smart phone.

I.INTRODUCTION

In this project we generate Aadhar QR Code using python to detect which person is vaccinated or not and how many doses he was taken. QR code is a type of matrix bar code or two-dimensional code that can store data information and designed to be read by smartphones. QR stands for “Quick Response” indicating that the code contents should be decoded very quickly at high speed. The code consists of black modules arranged in a square pattern on a white background. The information encoded may be text, a URL or other data.

Types of QR Codes:

1. QR model 1 and 2:

QR Codes are categorized into five broad categories. The original QR Code is QR Code Model 1, a code capable of coding 1,167 numerals with its maximum version being 14 (73 x 73 modules). QR Code created by improving Model 1 so that this code can be read smoothly even if it is distorted in some way. QR Codes that are printed on a curved surface or whose reading images are distorted due to the reading angle can be read efficiently by referring to an alignment pattern embedded in them. This code can encode up to 7,089 numerals with its maximum version being 40 (177 x 177 modules).

2. Micro QR Code:

A major feature of Micro QR Code is it has only one position detection pattern, compared with a regular QR Code that require a certain amount of area because position detection patterns are located at the three corners of a symbol.

3. Logo QR Code:

The Logo QR Code is a novel type of QR Code created to enhance visual recognizing-ability by blending it with letters and pictures in full color.

4. iQR Code:

iQR Code is a matrix-type 2D code, allowing easy reading of its position and size. This code allows a wide size range of codes from ones smaller than the traditional QR Code and Micro QR Code to large ones that can store more data than these.

This code can be printed as a rectangular code, turned-over code, black-and-white inversion code or dot pattern code (direct part marking as well, leaving a broad range of applications in various areas).

5. Encrypted QR code:

Encrypted QR Code is a type of QR Code equipped with reading restricting function. This can be used to store private information and to manage a group which is capable of accessing QR Code information. Basically, an encrypted



QR Code is a QR Code, which contains encrypted data. Working Of QR Code: The QR code system consists of a QR code encoder and decoder. The encoder is responsible for encoding data and generation of the QR Code, while the decoder decodes the data from the QR code.

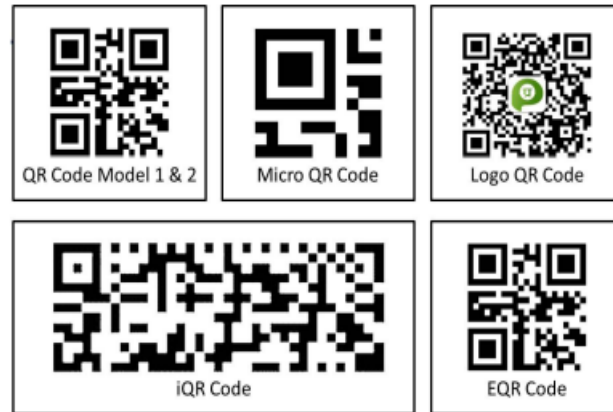


Fig. Types of QR Code

II.LITERATURE SURVEY

1. Paper name: QR Code Generator and Detector using Python

Author: Mr. B.Naga Raju,1.N.Venkatesh,2 G.Dhana Lakshmi,3 N.Sai Chand

This system can create QR of different versions.we consider a QR Code to be successfully. Precise localization is a necessary but not sufficient condition for successful decoding.

2. paper name: Certificate Authentication Using QR Code and Smart Phone

Author: International Journal of Emerging Technologies in Engineering Research (IJETER)

In this paper, QR Code on the degree certificate and by introducing the smart phone application which will read the digital data from the QR Code..In future we can add GUI elements to the QR code like images, audio etc.

3. paper name: QR Code Security and Solution 7

Author: Sukhjeet Kaur

In this paper we outlined to believe that QR codes have great future in online marketing business media.Also, this paper can be provided as the first step for the readers to search out the exciting topic of mobile learning.

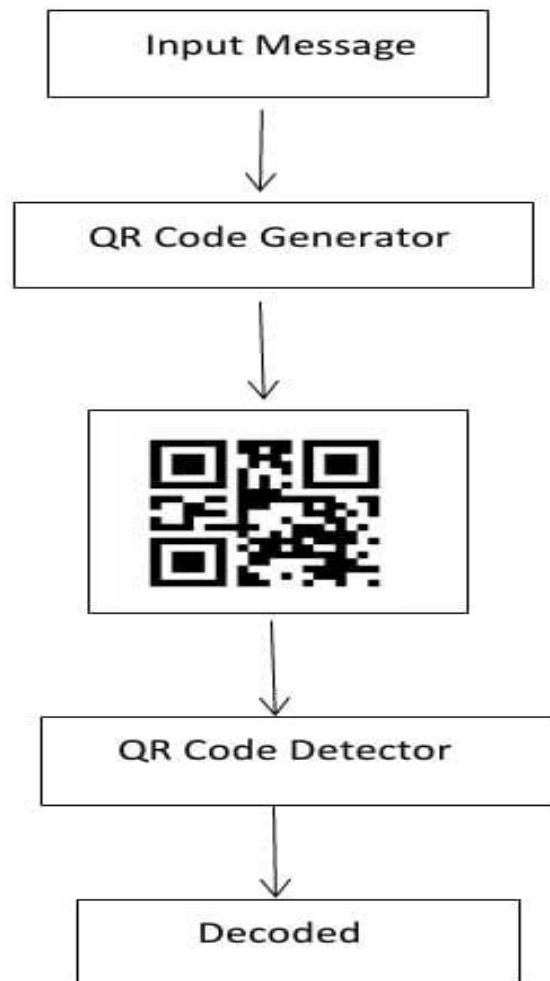
4. paper name: An Introduction to QR Code Technology

Author: Sumit Tiwari

In this paper, we studied QR code technology, its benefits, application areas, and its impact on marketing and technological world.Due to its features like high data storage capacity, fast scanning, errorcorrection,direct marking and ease of use.

III.PROPOSED SYSTEM

In this system we generate a Aadhar QR code Using machine learning to detect which person is vaccinated or not and how many dose he has taken.It stores the huge amount of data and it provides the instant mechanism through authentication.



IV.ALGORITHM

Reed Solomon Method :

Basically, the Reed Solomon method is an algorithm that all QR code readers have built-in as standard. It allows QR codes to be scanned even if a certain amount of the QR code is covered up or blocked. Reed–Solomon codes are able to detect and correct multiple symbol errors. By adding $t = n - k$ check symbols to the data, a Reed–Solomon code can detect (but not correct) any combination of up to t erroneous symbols, or locate and correct up to $t/2$ erroneous symbols at unknown locations. There are two basic types of Reed–Solomon codes – original view and BCH view – with BCH view being the most common, as BCH view decoders are faster and require less working storage than original view decoders. Today, Reed–Solomon codes are widely implemented in digital storage devices and digital communication standards, though they are being slowly replaced by Bose–Chaudhuri–Hocquenghem (BCH) codes. Reed–Solomon coding is very widely used in mass storage systems to correct the burst errors associated with media defects. Almost all two-dimensional bar codes such as PDF-417, MaxiCode, Datamatrix, QR Code, and Aztec Code use Reed–Solomon error correction to allow correct reading even if a portion of the bar code is damaged. When the bar code scanner cannot recognize a bar code symbol, it will treat it as an erasure. Reed–Solomon coding is less common in one-dimensional bar codes, but is used by the PostBar symbology. The Reed–Solomon code is actually a family of codes, where every code is characterised by three parameters: an alphabet size q , a block length n , and a message length k , with $k \leq n \leq q$. The set of alphabet symbols is interpreted as the finite field of order q , and thus, q must be a prime power. In the most useful parameterizations of the Reed–Solomon code, the block length is usually some constant multiple of the message length, that is, the rate $R = k/n$ is some constant, and furthermore, the block length is equal to or one less than the alphabet size, that is, $n = q$ or $n = q - 1$. [citation needed]

**V.CONCLUSION**

The purpose of this project is to detect the person is vaccinated or not and how many dose he was taken.

REFERENCES

- [1] Mr. B.Naga Raju,1 N.Venkatesh,2 G.Dhana Lakshmi,3 N.Sai Chand,4 D.Haritha,5 1 Asst. Professor, Department of Computer Science and engineering, 2,3,4,5 Student, Department of Computer Science and engineering, 1,2,3,4,5 QIS College of Engineering and Technology.”QR Code Generator and Detector using Python”,Volume 13, Issue 1, 2022
- [2] “Participant and Strategy Selection of Health QR Code Product Experience Design during the COVID-19 Pandemic in China: The Information Security Perspective”, Hindawi Discrete Dynamics in Nature and Society Volume 2021, Article ID 4097225.
- [3] “Certificate Authentication Using QR Code and Smart Phone”,International Journal of Emerging Technologies in Engineering Research (IJETER) Volume 5, Issue 5, May (2017)
- [4] Nitis Monburinon, Prajak Chertchom, Thongchai Kaewkiriya, Suwat Rungpheung, Sabir Buya, Pitchayakit Boonpou, “Prediction of Prices for Used Car by using Regression Models” (ICBIR 2018).
- [5] deel U., Yang S., McCann, J. A. (2014). Self-Optimizing Citizen centric Mobile Urban Sensing Systems. Proceedings of the 11th International Conference on Autonomic computing