



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

# IJIRSET

International Journal of Innovative Research in  
**SCIENCE | ENGINEERING | TECHNOLOGY**

# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 12, Issue 4, April 2023

**ISSN** INTERNATIONAL  
STANDARD  
SERIAL  
NUMBER  
INDIA

Impact Factor: 8.423

9940 572 462

6381 907 438

[ijirset@gmail.com](mailto:ijirset@gmail.com)

[www.ijirset.com](http://www.ijirset.com)



# Identifying Fake Products through A Barcode Using Machine Learning

**Prof. A N. Kawade, Sarade Sonali Shahaji, Devkate Snehal Sadashiv, Markad Ankita Bibhishan,**

Department of Computer Engineering, S. B. Patil Technical Campus, Indapur, India

B. E. Department of Computer Engineering, S. B. Patil College of Engineering, Indapur, India

B. E. Department of Computer Engineering, S. B. Patil College of Engineering, Indapur, India

B. E. Department of Computer Engineering, S. B. Patil College of Engineering, Indapur, India

**ABSTRACT:** Today's technology makes it possible to find and get information on anything. The more members of the general public who use machine learning technologies, the more data may be obtained. There are now many examples of cosmetic circulation violations in Indonesia. As an illustration, consider the distribution of products without a valid BPOM (Food and Drug Supervisory Agency) registration code that was manufactured fraudulently by unreliable individuals. In addition to the many cases of aesthetic breaches, there have also been changes in people's behaviors, such as shifting consumption patterns (users). The general public still has a very limited understanding of how to choose and use safe products. counterfeit products are detected using a QR code scanner. In this project Python qrcode (Quick Response (QR) code) module are used to decode the qr code information. A consumer can verify the product distribution and ownership information scanning a Quick Response (QR) code. The study's research methodology used the waterfall method and qualitative methodologies. By simply scanning the barcode, as this programme is designed to do, the general public can quickly ascertain whether a cosmetic product is genuine or not before purchasing it.

**KEYWORDS:** Barcode, QR Code, BPOM, Cosmetic, fake product detection, simply scanning the barcode.

## I. INTRODUCTION

### A. Overview

The counterfeit sector is thought to be worth US\$250 billion annually<sup>1</sup> and is expanding, according to the UN. The threat of counterfeiting exists for almost every company, which not only lowers revenue but also damages brand reputation. Due to these losses, businesses usually are unable to repay their RD expenditure, which restricts their future ability to develop influential products. A different school of thinking contends that certain nations' organised crime is funded by fake goods; no respectable business would want to be linked to this. items that are counterfeit put consumers at risk, and some of these items may even be lethal or pose major health hazards. When it comes to toys for children or medical supplies, it might be harmful for customers to identify counterfeit products. We will focus on the area where the use of IT technology can make a constructive contribution while highlighting the issue of fake domains. After introducing the relevant works, we will briefly describe the solution concept and technological architecture before concentrating on the implementation, assessment, and issues associated with such solutions.

### B. Motivation

• There In recent years, the global distribution of counterfeit goods has increased. There are many fake products in the current supply chain. According to the poll, the prevalence of fake goods has grown recently.

• A system that enables customers or users to confirm all the product's specifications so they may identify whether the item is genuine or not must be in place. India currently lacks a framework for identifying bogus goods. In order to help the end-user or customers scan and confirm the product's legitimacy using a system, the solution includes a simple QR code-based identification.



## II. PROPOSED SYSTEM

### Algorithm

pyqrcode module is a QR code generator. The module automates most of the building process for creating QR codes. This module attempts to follow the QR code standard as closely as possible. The terminology and the encodings used in pyqrcode come directly from the standard. We will use OpenCV to read QR code. If the package is not installed, it can be installed as below: `pip install cv2` QR code can be decoded using `detectAndDecode` function of `QRCodeDetector` object of `opencv2`

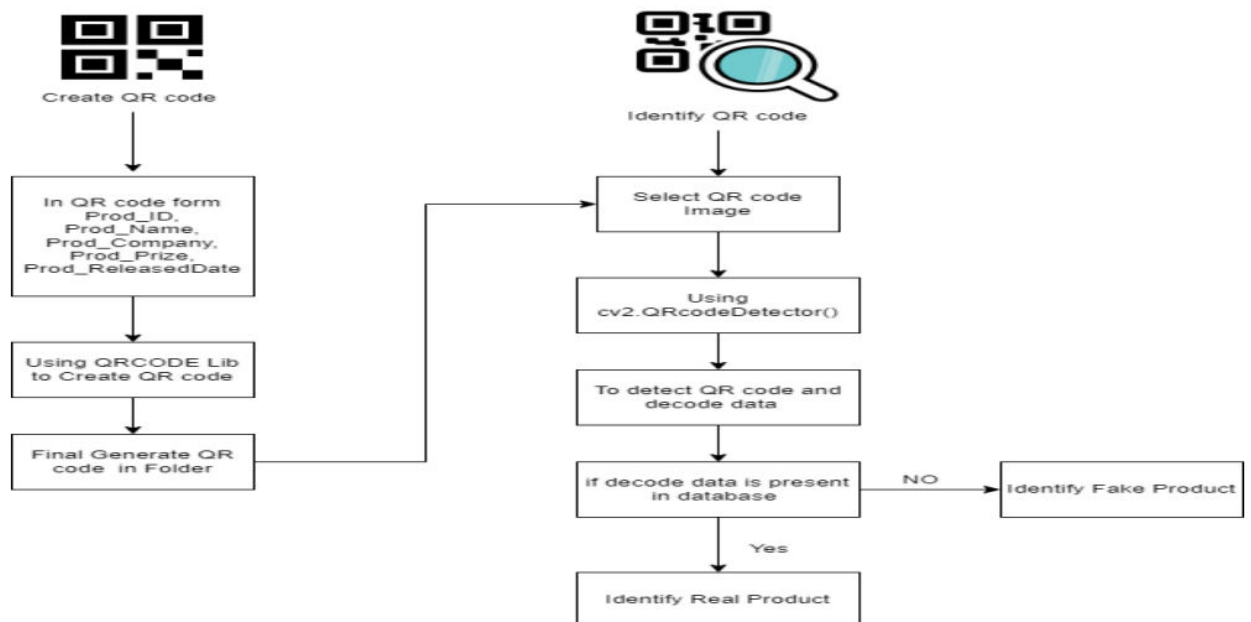
**Step1** :Stored data in database(DBsqlite3). First product details stored in database.

**Step2** : Create QR code `qrtools` contains a class `QR` (can be viewed in the source code), for which we must initially create an object. The object takes the following arguments `data`, `pixel size` `level` `margin size` `data type` To create a QR code with default settings, we must simply specify the `data` while creating the object. Note that the `data` must be a unicode object if non-ASCII objects are going to be used.

**Step3** : Scan QR code using Scanning and reading a QR code is relatively simple. While creating the QR object, we must simply specify the path to the QR code as an argument. Suppose we are trying to decode the QR code created at the beginning of the article. We may also print the values of the other parameters passed while creating the QR object to generate the QR code.

**Step4** : Detect Fake or Not. After scanning , compare data to the database and then verify details is fake or real.

### Flowchart



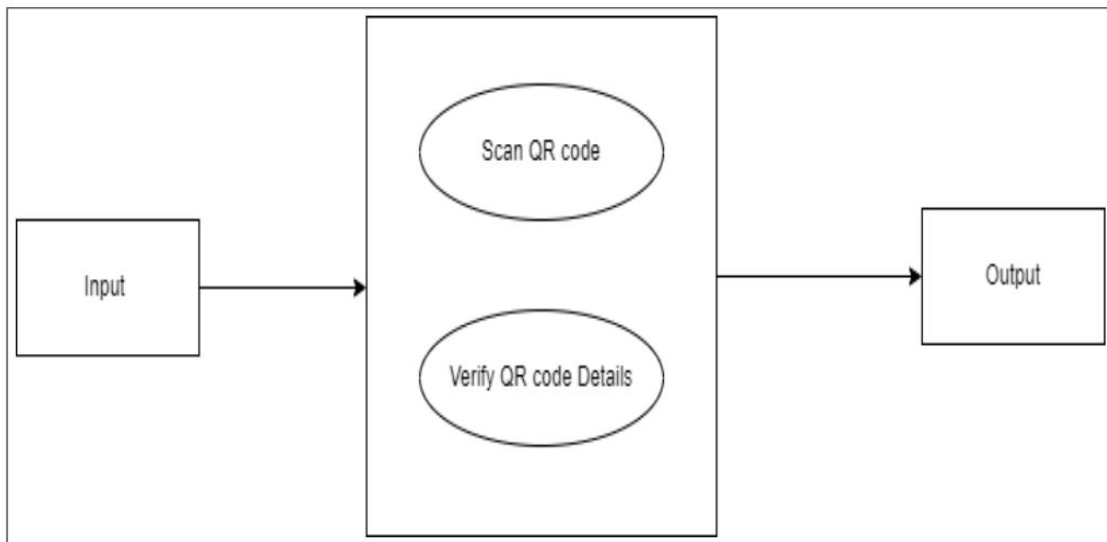


**DFD Diagram**

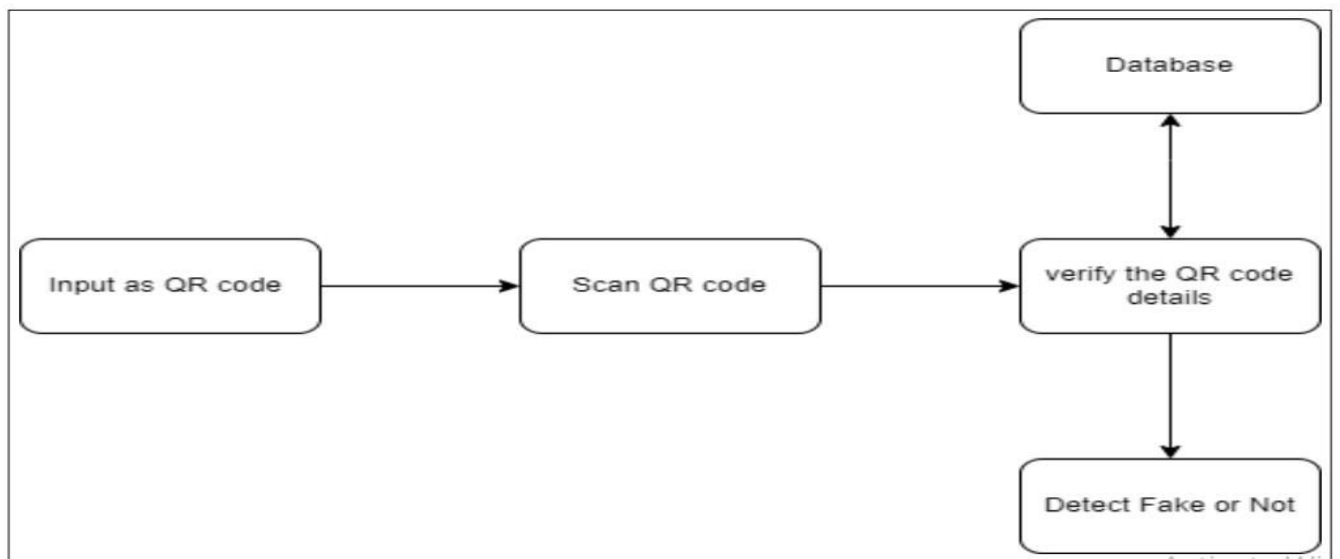
**Level 0**



**Level 1**



**Level 2**





### Advantages

- To detect counterfeits, any customer would be able to do that using the detection application.
- Inexpensive.
- Environmental factors are not an issue.
- User-friendly and used easily.
- To help people to identify the products.

### Application

- Shops
- Malls
- D-mart
- Government
- Medical Store.
- Agriculture Products.

### III. CONCLUSION

There are many instruments for spotting fake items, however they only take pictures of the logo or barcode. The objective of this study is to provide a strategy for developing a tool that might capture an image of a product logo, process it using artificial intelligence, and distinguish text and colours to evaluate whether a product is authentic or fake. This programme will show how portable and user-friendly it is. For those who lack technique, it will be quite helpful.

### REFERENCES

- 1) Syed Mohammed Anas, Santoshi Kumari, "Opinion Mining based Fake Product review Monitoring and Removal System", M S Ramaiah University of Applied Sciences, Bangalore, India,2021.
- 2) Tejaswini Tambe, Sonali Chitalkar, Manali Khurud, Madhavi Varpe, S. Y. Raut, "Fake Product Detection Using Blockchain Technology", 2021.
- 3) Mrs.M.C.Jayaprasanna,V.A.Soundhary, M.Suhana, Dr.S.Sujatha, "A Block Chain based Management System for Detecting Counterfeit Product in Supply Chain", 2021.
- 4) Jinhua ma, shih-ya lin, Xin Chen , Hung-Min Sun, Yeh-Cheng Chen, "The supply chain management system consists of several stages and various sectors of applications in supply chain",IEEE Access,2020.
- 5) Nour Jnoub, "Declarative Programming Approach for Fake Review Detection", Research Group Multimedia Information Systems University of Vienna, Austria,2020.
- 6) Wenqian Liu, Jingsha He, Song Han, FangboCai, Zhenning Yang, Nafei Zhu, "A Method for the Detection of Fake Reviews Based on Temporal Features of Reviews and Com- ments".
- 7) Fatih Cagatay Akyo, M. Esat Kalfaoglu, "Instagram Fake and Automated Account Detection", Elektrical Electronics Engineering, Ihsan Dogramaci Bilkent University, Ankara, Turkey, Electrical Electronics Engineering, Middle East Technical University, Ankara, Turkey in 2021.
- 8) Ata-Ur-Rehman , Nazir M. Danish , Sarfraz M. Tanzeel, "Intelligent Interface for Fake Product Review Monitoring and Removal".
- 9) Fatihcagatay Akyon, M. Esat Kalfaoglu, "Instagram Fake and Automated Account Detection".
- 10) Sanjay K. S, Dr. Ajit Danti "Detection of fake opinions on online products using Decision Tree and Information Gain" Third International Conference on Computing Methodologies and Communication (ICCMC 2019),2019.



Impact Factor: 8.423



# INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

 9940 572 462  6381 907 438  [ijirset@gmail.com](mailto:ijirset@gmail.com)



[www.ijirset.com](http://www.ijirset.com)

Scan to save the contact details