iJRASET
International Journal For Research in Applied Science and Engineering Technology

# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

**Volume:** 9 **Issue:** VI **Month of publication:** June 2021

**DOI:** https://doi.org/10.22214/ijraset.2021.35389

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
*ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429*
*Volume 9 Issue VI Jun 2021- Available at www.ijraset.com*

# Providing Security for Patient's E-Prescription using Cryptography Technique

Prof. Nayana Sonwane[1], Yugandhara Chaudhari[2], Anshuja Kumbhar[3], Vishakha Pundge[4], Vaishnavi Wayal[5]
[1]*Assistant Professor Department of Computer Engineering, PDEA's College Of Engineering, Pune, India.*
[2, 3, 4, 5]*Student Department Of Computer Engineering PDEA's College of Engineering, Pune, India.*

***Abstract:*** ***The benefits of electronic medical prescriptions and the information and communication technologies that benefit those areas have led to significant improvements in healthcare over the years. In the overall context of health care information protection, the confidentiality of data reported by doctors requires special treatment. This paper introduces an e-prescription system that addresses some of the challenges associated with prescription privacy protection in the process of prescribing drugs. The main purpose is to provide security and protect prescription from being stolen. The benefit of project is that it provides the different results in short time. Our goal is to provide online user with the appropriate tools to secure their medical prescription from being misuse by intruder. Our solution is not only straight forward but also easy to grasp by those who will join us to make a global difference. .The biggest advantage we have is that we can encrypt and decrypt by using proper algorithm so that only intended user can decrypt it.***

***Index Terms: AES, Encryption, decryption***

## I. INTRODUCTION

Brought the electronic-age and the Internet About the use of computer-aided medical care such as e-Health, e-health records and e-prescriptions. With this Information is now available electronically, which makes it easier Evans droppers, hackers and other malicious attackers to gain access Confidential information is connecting personal health Information on the Internet reveals more information Adverse attacks compared to paper-based medical records. Electronic writing is an electronic way And send prescription and prescription related information Using electronic media between a prescriber and distribution Pharmacy . Electronic writing helps health Provider for sending accurate and clear instructions This will reduce medication in the pharmacy electronically Error due to incorrect explanation of written rules. Patient health information as written Information and health records are always confidential and Transfer of medical regulations concerned with privacy It is possible to go from the hospital to the pharmacy Attacks by intruders can be written off. Modified or forged. This is the reason why most intruders. Most of the information they have gained is successful The system is in a form that can read and understand them. Intruder This information can be passed on to others, make changes to it in order to misrepresent it Use it to target a person or attack [1]. Medical prescription and related medical records Sensitive and personally confidential information is transmitted There are daily between hospital and pharmacy risk of potential attack by unauthorized persons. Due to sensitive nature of the information being transmitted The possibility of this information being disrupted is a risk It is not possible to exaggerate. Cryptography is all about scrambling information In unreadable form, on the other hand, is steganography Techniques for hiding information in digital media. This is art And the science of hiding data in different carrier files such as Text, audio, images, videos, etc. The main goal of steganography It is to communicate securely in the fully conscious. Manner and to avoid doubting the transition hidden data is not steganography, unlike cryptography But to prevent others from knowing the hidden information Keep others from thinking that information exists. To Ensure safe transfer of prescriptions between the system presents this paper, written and delivered. Development of electronic prescription systems and applies steganography and an encryption algorithm to it Protect prescriptions generated by doctors or others Be sure to have a healthcare provider and only a registered pharmacy ability to access these instructions.

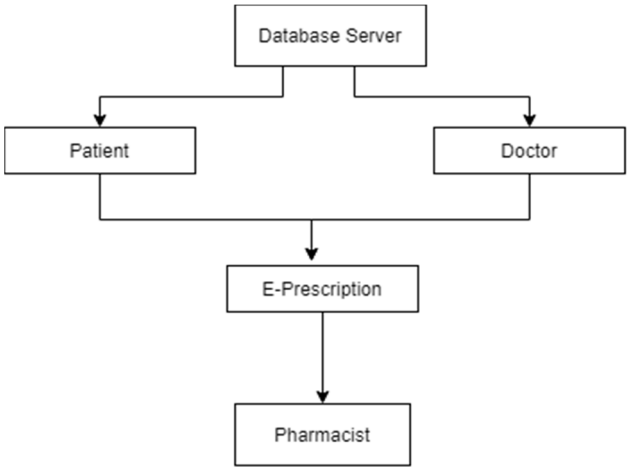
## II. RELATED WORK

Despite the advent and development of data transfer Sending prescriptions via the Internet has been made easier Faster and more accurately, from hospital to pharmacy It can also be easy for personal and confidential There are and are known to hack or steal in many ways Interrupt, interrupt, modify, And making medical replicas for a variety of reasons Including obtaining drugs for recreational purposes or to feed Writing an addiction or medical or financial instruction Identity theft and various scams. Steganography technology Properly covered, it will withstand a great deal of adverse conditions The increasing demand for prescriptions will effectively improve information and privacy.

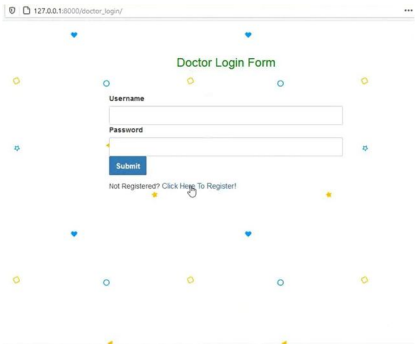
Some notable works hence it has been reported in this context In [15], the author developed an algorithm, F5, which applies matrix encoding and sequential stranding in Improve the functionality of embedding hidden messages in Images by reducing the number of necessary changes Spread the change evenly over the entire cover image equalizing the embedding rate. F5 saves the algorithm Offers characteristic properties and resistance against visual and statistical attacks. In the context of e-prescription and cryptography, [10] developed an electronic prescription system which uses a public key infrastructure. There is privacy a symmetrical key cryptography and Identification of attribute certificates allowed for allocation of privileges. There is an electronic prescription generated and digitally signed by entering a secret PIN. Then, the prescription is uploaded to the database where it is.
Where its prescription is referred to by a unique identifier The pharmacy enters through it. In pharmacy, drugs Is retrieved, the signature of the prescriptor is verified The prescription is decoded. However, Seaford information probably Still can be easily spotted as encrypted and a try is possible Prepare to unfold content. A steganography algorithm The amendment was introduced in [1] in which the author Developed a steganography system with minimal focus The critical bit (LSB) technique of hiding messages in Image. The system advanced technology to provide L randomly dispersed means of secure communication Bits of the message in the cover image against Sequence-mapping technique Locations of image pixels In which the secret message is to be embedded is determined by In separate logarithm calculations, the stego key is also used The embedding process makes it more difficult for unauthorized people to do remove original message. The disadvantage of this is LSB The insertion method is extremely unsafe for the image Using the hand to make the desired movement [10] Similarly, by adopting cryptography, [14] made a description Electronic prescription system that requires a password to grant the user access to the system. It includes a public key Infrastructure (PKI) technology and digital signatures. Using one PKI, prescriptions are encrypted before prescriptions and The recipient must have both public and private keys decode message. Although the system offered a high level Security, privacy and authentication, limits There was a high cost and difficulty associated with this design Implementing technology. Similarly, []] described that use Which uses a fingerprint of an electronic prescription system recognition as an authentication mechanism. There is privacy This is ensured using public key cryptography algorithms encrypt prescriptions and are used to bind digital signatures Public key for user identification. Pharmacist, here receiving end, decrypts and retrieves the prescriptions using the decrypting algorithm and verifies who the prescriptions came from using the digital signature. [7] later developed an electronic prescribing system to increase the efficiency of the prescribing process. The system was created within a web environment which allows the physician to access the prescription system via the internet. The prescriptions would be uploaded by the doctors onto a database where the pharmacy would access it. The limitations the system had were the lack of any security features such as cryptography, steganography, digital certification, firewalls and secure protocols

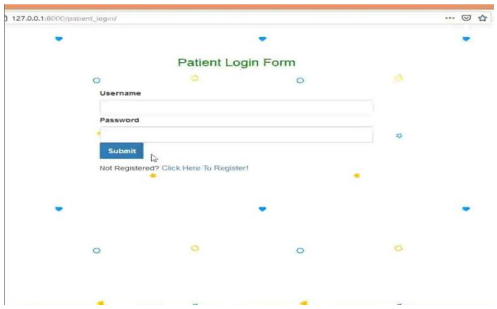
## III. IDENTIFY, RESEARCH AND COLLECTIDEA

The purpose of this project is to implement real time augmented reality application for online security. This application with the help of input prescription performs different cryptography operations on text such as encryption and decryption The main purpose is to provide security and protect prescription from being stolen. The benefit of project is that it provides the different results in short time. Our goal is to provide online user with the appropriate tools to secure their medical prescription from being misuse by intrude



## IV. RESULT




## V. CONCLUSION

Our satisfaction is not only straightforward but also easy to understand by those who join us to make a global difference. Your biggest advantage is that we can encrypt and decrypt using the right algorithms so that only the intended user can decrypt. Finally protect patients with e-prescriptions..

## REFERENCES

[1] Amin, M.M., Salleh, M., Ibrahim, S., Katmin, M.R., Shamsuddin, M.Z.I.. (2003). Information hiding using steganography. Proceedings. 4th IEEE National Conference on Telecommunication Technology (NCTT ’03), pp 21 - 25 International Journal of Computer and Information Technology (ISSN: 2279 – 0764) Volume 03 – Issue 05, September 2014 www.ijcit.com 986

[2] Bhattacharyya, D, Das, P., Bandyopadhyay,S.K, Kim, T. (2009). Steganography: A Novel Approach. nt. J. of Advanced Science and Technology. Volume 3, pp 79 – 86.

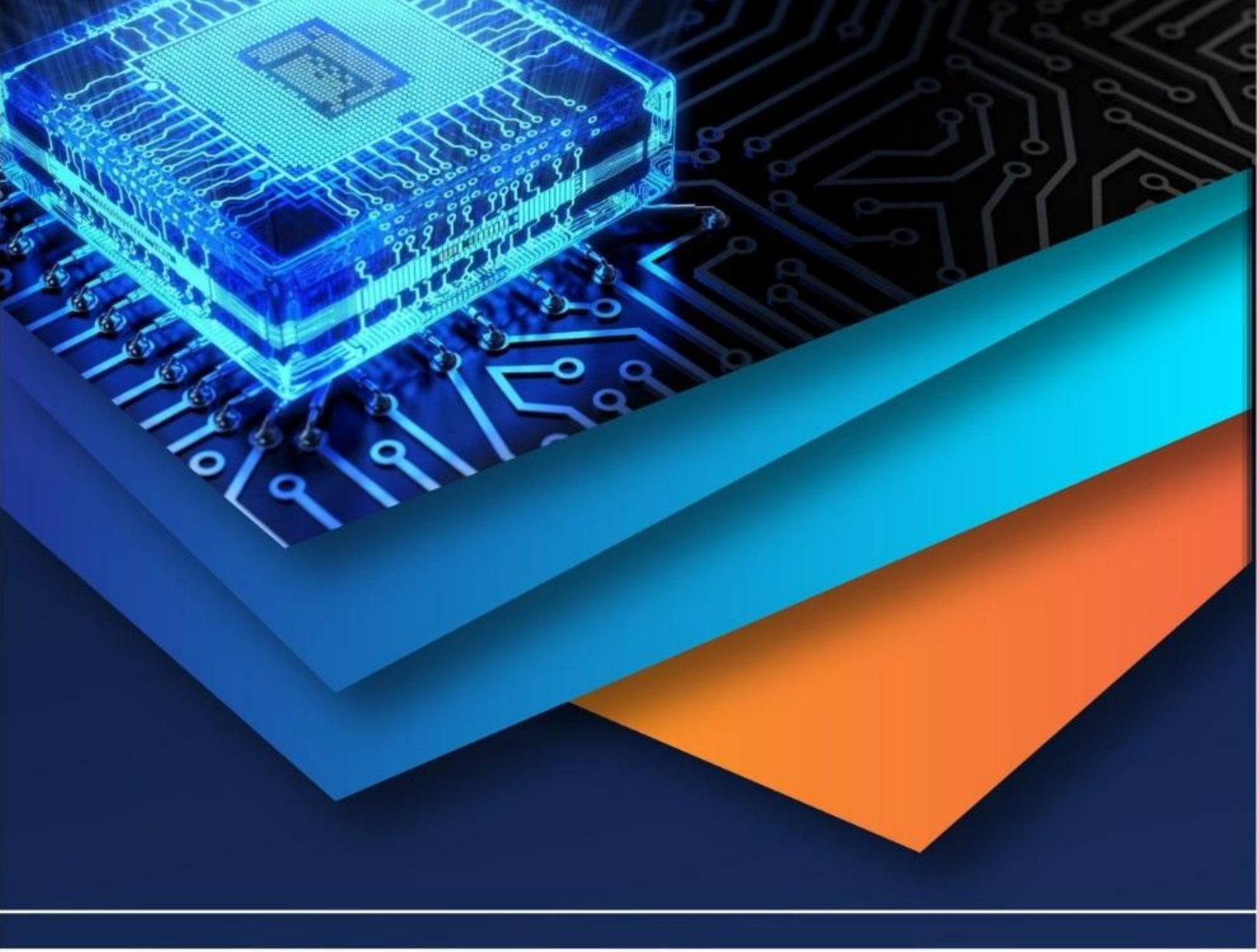
[3] Ciampa, M. (2012). Security+ Guide to Network Security Fundamentals. Ch 11, “Basic Cryptogrphy” Fourth edition. Pp 422 . Course Technology, Cengage Learning. Boston, MA 02210, USA

[4] Ehealth Initiative. (2008), A clinician's guide to electronic prescribing. Available http://www.aaos.org/research/committee/evidence/eprescribingguide.pdf (Accessed 03/09/2014)

[5] Emuoyibofarhe .O.J., Omotosho .A. (2012). ”Development of a Secure Intelligent E-Prescription System”. In proceedings of The International eHealth, Telemedicine and Health ICT Forum for Education, Networking and Business (MedTel 2012) Conference 10th Edition.18- 20 April. Luxembourg.pp 261 - 272

[6] Ibrahim, R. and Kuan, T.S. (2011). Steganography Algorithm to Hide Secret Message inside an Image. International journal of Computer Technology and Application, vol. 2, pp. 102-108.

[7] Joia, L.,A., Magalhaes, C. (2009). Implementation of an electronic prescription system in Brazilian general hospital: understanding source of resistance. EJISDC.39(2):1–18.



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

# INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY