

# Emoji Encryption Using AES Algorithm

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## ABSTRACT

This is a Web based application helping user to Encrypt and decrypt the data, that the user wants to secure. This method of encryption can be used for Military and Government documents for communication purpose. Emoji are ideograms and smileys used in electronic messages and web pages. Emoji exist in various genres, including facial expressions, common objects, places and types of weather, and animals. They are much like emoticons, but emoji are actual pictures instead of typo graphics.

**How to cite this paper:** Sahana Dass R | Dr. J. Bhuvana "Emoji Encryption Using AES Algorithm" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-6 | Issue-2, February 2022, pp.1198-1200, URL: [www.ijtsrd.com/papers/ijtsrd49402.pdf](http://www.ijtsrd.com/papers/ijtsrd49402.pdf)



IJTSRD49402

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## 1. INTRODUCTION

A tool to teach people about the concepts that underlie encryption. CRYPTOJI turns emojis into ciphers. You put a word or phrase into the system, choose a starting point emoji, and then it spits out a string of them representing an encoded version of the letters in your word or sentence.

This type of algorithm, which takes an input and encodes it using a series of steps so it can later be decoded by running the steps in reverse, is the foundation of the digital systems we call encryption. Beyond CRYPTOJI, encryption has ongoing efforts to teach people about encryptions methods and its value.

“We believe CRYPTOJI is a first step for everyday Internet users to better understand encryption”. But don’t forget, “CRYPTOJI is intended as a learning tool, not a platform for sharing personal data. Thankfully, modern encryption is much stronger than simple emoji ciphers. If you are going to be sending sensitive information, best to use CRYPTOJI as a security tool.”

## 2. LITERATURESURVEY

The Design of Rijndael,

AES - The Advanced Encryption Standard

Authors: Daemen, Joan, Rijmen, Vincent

In October 2000, the US National Institute of Standards and Technology selected the block cipher Rijndael as the Advanced Encryption Standard (AES). AES is expected to gradually replace the present Data Encryption Standard (DES) as the most widely applied data encryption technology.

This book by the designers of the block cipher presents Rijndael from scratch. The underlying mathematics and the wide trail strategy as the basic design idea are explained in detail and the basics of differential and linear cryptanalysis are reworked. Subsequent chapters review all known attacks against the Rijndael structure and deal with implementation and optimization issues. Finally, other ciphers related to Rijndael are presented.

This volume is THE authoritative guide to the Rijndael algorithm and AES. Professionals, researchers, and students active or interested in data encryption will find it a valuable source of information and reference.

### 3. EXISTINGSYSTEM

Image Encryption using DES algorithm. In the encryption method we considered two inputs, one is encryption secret key and another one is original color image. Image file can be reshaped or divided pixel block of original image and express DES encryption process and defining the key for encryption that is secret key. By using DES algorithm procedure finally original image is encrypted with security, this is encrypted image.

#### 3.1. Disadvantages of the existing system

- The 56-bit key size is the biggest defect of DES. Chips to perform one million of DES encrypt or decrypt operations a second are available (in 1993). A \$1 million DES cracking machine can search the entire key space in about 7hours.
- Hardware implementations of DES are very fast; DES was not designed for software and hence runs relatively slowly.
- As the technology is improving lot more day by day so there is a possibility to break the encrypted code, so AES is preferred than DES.
- As we know in DES only one private key is used for encryption as well as for decryption because it is symmetric encryption technique so if we lost

that key to decrypt the data then we cannot get the readable data at the receiving end.

### 4. PROPOSEDSYSTEM

**Design Phase:** Creating an emoji encryption is to protect data that is transferred from one to the other.

**AES ALGORITHM:** The encryption process uses a set of specially derived keys called round keys. These are applied, along with other operations, on an array of data that holds exactly one block of data? The data to be encrypted. This array we call the state array.

You take the following aes steps of encryption for a 128-bit block:

- Derive the set of round keys from the cipher key.
- Initialize the state array with the block data (plaintext).
- Add the initial round key to the starting state array.
- Perform nine rounds of state manipulation.
- Perform the tenth and final round of state manipulation.
- Copy the final state array out as the encrypted data (ciphertext).

## Encryption operation

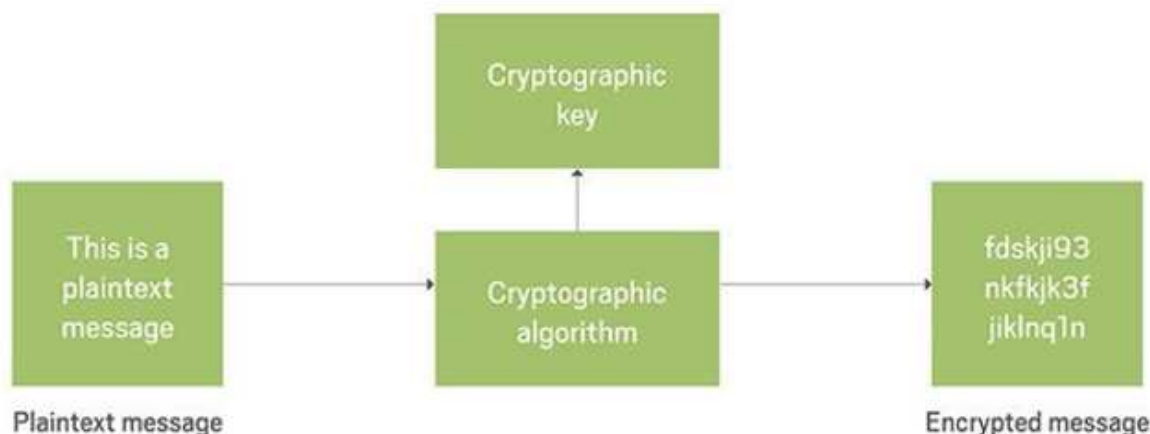


Fig 4.1 Encryption Operation

### 5. CONCLUSION

To conclude, Emojis in messages can get you to pass the first impression with the customers and then help you drive higher open rates, more conversions and also greater connections with your user.

This project shall prove to be a powerful project in satisfying all the wants of the encryption in order to help the society to easily encrypt the messages.

The users always demand content that will keep them engaged. So, it is very much essential to be careful to

send emoji's that will spark them and then apparently resonate with emotion on an individual level and at scale.

### 6. ACKNOWLEDGEMENT

I should convey my real tendency and obligation to Dr MNNachappa and Dr. J. Bhuvana undertaking facilitators for their effective steerage and consistent inspirations all through my assessment work. Their ideal bearing, absolute co-action and second discernment have made my work gainful.

## 7. REFERENCES

- [1] Advanced Encryption Standard Algorithm: Issues and Implementation Aspects by Ahmed Fathy Ibrahim F. Tarrad Hesham F. A. Hamed Ali Ismail Awad
- [2] The Design of Rijndael: AES - The Advanced Encryption Standard (Information Security and Cryptography) 2002nd Edition by Vincent Rijmen
- [3] Applied Cryptography: Protocols, Algorithms and Source Code in C 20th Anniversary Edition by Bruce Schneier
- [4] Cryptography Engineering: Design Principles and Practical Applications 1st Edition by Niels Ferguson
- [5] Understanding Cryptography: A Textbook for Students and Practitioners 1st ed. 2010 Edition by Christof Paar
- [6] Serious Cryptography: A Practical Introduction to Modern Encryption by Jean-Philippe Aumasson
- [7] The Mathematics of Encryption: An Elementary Introduction (Mathematical World) by Margaret Cozzens and Steven J. Miller
- [8] Modern Cryptography: Applied Mathematics for Encryption and Information Security by Chuck Easttom
- [9] The Mathematics of Secrets: Cryptography from Caesar Ciphers to Digital Encryption by Joshua Holden
- [10] The Emoji Code: How Smiley Faces, Love Hearts and Thumbs Up are Changing the Way We Communicate by Vyvyan Evans
- [11] <https://www.w3schools.com/js/>
- [12] <https://ieeexplore.ieee.org/document/5071626>

