K. R. MANGALAM UNIVERSITY
THE COMPLETE WORLD OF EDUCATION

<u>Major Project</u>

<u>Data Analysis in Cyber Forensics</u>

Project report submitted.

In partial fulfillment of the requirement for the degree of

B. Sc. (H) Cyber Security

Submitted By:

Shubham Kumar Saini (2001830003)

&

Vikash Kumar Sinha (2001830013)

Under the guidance of

Ms. Ruchika

School of Engineering & Technology
K. R. Mangalam University, Gurugram - 122003

June-2023

School of Engineering & Technology, K.R Mangalam University

Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

DECLARATION

We declare that this written submission represents our ideas in our own words and where other's ideas or words have been included, we have adequately cited and referenced the original sources. We also declare that we have adhered to all the principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will because for disciplinary action by the Institute and canal so evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed. We further declare that if any violation of the intellectual property right or copyright, my supervisor and university should not be held responsible for the same.

Shubham Saini (2001830003)
Vikash Kumar Sinha (2001830013)

Place: K.R. Mangalam University

Date: 8th June 2023

School of Engineering & Technology, K.R Mangalam University

CERTIFICATE

Connectel Security Systems Private Limited
(Forensic Division)

Office : Flat No. 31, First Floor, Shankar Market, New Delhi – 110001
Phone : +91 11 2081 0555 / 2081 0666
Mobile : +91 98730 33000, +91 98994 80000
Email : info@connectel.in , hr@connectel.in
Reg. Office : 29-B, Pocket-A, GTB Enclave, Delhi – 110093, India

CIN: U51909DL2010PTC205183
GSTN: 07AAECC0411C2ZI

TC - 9472

India's First Private Forensic Science Laboratory Accredited with ISO/IEC 17025:2017 standards in testing by NABL

Registration No. CFL/2022/C/24   **Enrollment No. 2001830003**

TO WHOM IT MAY CONCERN

TRAINING CERTIFICATE

This is to certify that Mr. **Shubham Kumar Saini** S/O Mr. **Bhupandar Kumar Saini**, student of B.Sc.(H) Cyber Security, batch 2020-2023 from **KR Mangalam University** has successfully completed an internship in our Digital Forensic Science Domain for the period of **01st June 2022 to 31st August 2022**. We found him sincere, hardworking, dedicated, and result-oriented.

We wish him all the best in his future endeavours.

Dated: 31-August-2022

R.K Agrawal

Director

School of Engineering & Technology, K.R Mangalam University

Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

ACKNOWLEDGEMENT

"Enthusiasm is the feet of all progress, with it there is accomplishment and Without it there are only slits alibis."

Acknowledgment is not a ritual but is certainly an important thing for the successful completion of the project. At the time when we were made to know about the project, it was tough to proceed further as we were to develop the same on a platform, which was new to us. More so, the coding part seemed tricky that it seemed to be impossible for us to complete the work within the given duration.

We really feel indebted in acknowledging the organizational support and t5

The task of developing this system would not have been possible without the constant help of our faculty members and friends. We take this opportunity to express our profound sense of gratitude and respect to those who helped us throughout the duration of this project.

We express our gratitude to our supervisors Ms. Monika Khatkar for giving their valuable time and guidance to us.

Place: - K.R. Mangalam University

Date: - 8th June, 2023

Shubham Saini
Vikash Kumar Sinha

School of Engineering & Technology, K.R Mangalam University

K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

Online Food Order System

Project report submitted.

In partial fulfillment of the requirement for the degree of

Bachelor of SCIENCE

In

CYBER SECURITY.

by

ANUJ ROHILLA (2001830010).

Under the Supervision of

Ms. ASHA SOHAL.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING.

SCHOOL OF ENGINEERING & TECHNOLOGY.

K. R. Mangalam University, Gurugram, Haryana - 122103

June-2023.

DECLARATION

I declare that this written submission represents my ideas in my own words and where other's ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all the principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will because for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed. I further declare that if any violation of the intellectual property right or copyright, my supervisor and university should not be held responsible for the same.

ANUJ ROHILLA   (2001830010)

Place: K.R. Mangalam University

Date: 29 August 2023

CERTIFICATE

It is certified that the work contained in the project report titled " **Online Food Order System**" with cryptography by the following students:

Name of the Student: Roll Number:
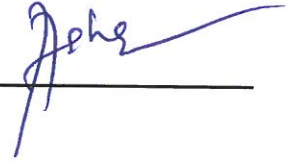
Anuj Rohilla   2001830010

has been carried out under our/my supervision and that this work has not been submitted elsewhere for a degree.

supervisor sign: _____

Ms. ASHA SOHAL.
Assistant Professor,
School Of Engineering and Technology,
K. R. Mangalam University, Gurugram, Haryana.

Date: - 29th August 2023

Place: - K.R. Mangalam University.

Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

ACKNOWLEDGEMENT

It gives me immense opportunity to express my deepest sense of gratitude and sincere thanks so my highly respected and esteemed guide **Ms. Asha Sohal**, school of engineering and technology, for their valuable guidance, encouragement and help for completing this work. Their useful suggestions for this whole work and co-operative behavior are sincerely acknowledged.

I would like to express my sincere thanks to **Mr. Ashwani Kumar**, KRMU for giving me this opportunity to undertake this project. I would also like to thank **Dr. Shweta Bansal** for wholehearted support.

I also wish to express my indebtedness to my parents as well as my family member whose blessings and support always helped me to face the challenges ahead.

At the end I would like to express my sincere thanks to all my friends and others who helped me directly or indirectly during this project work.

Place: - K.R. Mangalam University, Sohna.

Date: -29th August 2023.

ANUJ ROHILLA (2001830010).

Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

Hybrid Image ENCRYPTION using AES Algorithm and Chaos Theory

Project report submitted

In partial fulfillment of the requirement for the degree of

Bachelor of Science In Cybersecurity

By

ARIN SUKHWAL (2001830008)

Under the guidance of :

Mr. Manish Kumar

(CEO VIEH GROUP)

Department of Computer Science

School of Engineering and Technology

K. R. Mangalam University, Gurugram - 122003

8-June-2023

DECLARATION

We declare that this written submission represents our ideas in our own words and where other's ideas or words have been included, we have adequately cited and referenced the original sources. We also declare that we have adhered to all the principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be for disciplinary action by the Institute and canal so evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed. We further declare that if any violation of the intellectual property right or copyright, my supervisor and university should not be held responsible for the same.

Student Name **ARIN SUKHWAL**   (Roll No.) **2001830008**   (Signature)
                     DNYANAL PATIL   **2001830002**

Place: <u>K.R. Mangalam University</u>

Date: <u>8 June 2023</u>

Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

CERTIFICATE

It is certified that the work contained in the project report titled " Hybrid Image ENCRYPTION using AES Algorithm and Chaos Theory " by the following students:

VIEH GROUP

Think Secure
Think V.I.E.H

15 October 2022

## Experience letter for internship
TO WHOM IT MAY CONCERN

This is to certify that **Mr. Arin Sukhwal** has completed the Internship of 3 month at VIEH Pvt. Ltd. His internship tenure was from **1 July 2022** to **30 September 2022**. He was the part of **CyberSecurity team** as a **CyberSecurity Intern** and was actively and diligently involved in the projects and tasks assigned to him.

Project name: Image Encryption using AES
Teamleader: Mr. Jai Dhiyanesh J

During the span, we found him punctual and hardworking. His learning powers are good and he picks up swiftly. His feedback and evaluation proved that he learned keenly.

We wish him a bright future.

For V.I.E.H Private Limited

M Kumar
CEO - V.I.E.H Group

Ph: +91 8340254937
support@viehgroup.com
www.viehgroup.com

V.I.E.H Pvt. Ltd.
Andheri west, Mumbai
Maharashtra, India

Cert no: VIEH-INCERT202303

Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)

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ABSTRACT

Modern days, image security is necessary since data volume is growing rapidly. These data can be images, videos, text, audio, etc., so methods like AES, DES, RSA, etc. have been developed to secure these images from attackers who could reduce the image quality or manipulate the images. Data security has also become a key issue with the generation.

The most significant problem confronting the world now is data security. Advanced encryption standard is applied to protect data during communication, storage, and transfer (AES). AES is a symmetric encryption algorithm that is intended to take the place of DES in business applications. It employs a key size of 128, 192, or 256 bits and a block size of 128 bits. To protect information from unauthorized users, the AES algorithm is used. Both text and image data are encrypted using the AES technique that is currently available.

Key Words: **Steganography, AES, Python.**

Registrar
K.R. Mangalam University
Sohna Road, Gurugram, (Haryana)