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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that, the project entitled "A SECURE SYSTEM FOR PREVENTING CYBER ATTACKS USING GANS" has been successfully carried out by Satyam Kumar Chaubey [1SV19CS064], Shafiya Khanum [1SV19CS065], Shah Hussain Ahamed S A [1SV19CS066], Sinchana B S [1SV19CS071], in partial fulfillment for the award of **Bachelor of Engineering** in **Computer Science & Engineering** of the **Visvesvaraya Technological University, Belagavi** during the academic year **2022-23.** It is certified that all the corrections/suggestions indicated for internal assessments have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.

25/05/23

Signature of Guide
Mrs. Shruthi S B.E., M.Tech.,
Assistant Professor,
Dept. of CSE,
SIET, Tumakuru.

25/5/23

Signature of H.O.D
Dr. Basavesha D B.E., ME., PHD,
Associate Professor & HOD
Dept. of CSE,
SIET, Tumakuru.

Signature of Principal

PRINCIPAL
SIET. TUMKUR.

Dr. Narendra Viswanath M.E., Ph.D., MIE, MISTE, MIWS., FIV.,
Principal,
SIET, Tumakuru

External Viva

Name of the Examiners	Signature with Date
1. Dr. Basavesha D	27/5/23
2. Wasim Uddin	27/5/23

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DECLARATION

We, Satyam Kumar Chaubey [1SV19CS064], Shafiya Khanum [1SV19CS065], Shah Hussain Ahamed S A[1SV19CS066], Sinchana B S [1SV19CS071], student of VIII semester **B.E** in Computer Science & Engineering, at Shridevi Institute of Engineering & Technology, Tumakuru, hereby declare that, the project work-II entitled **"A Secure System For Preventing Cyber Attacks Using GANs ",** embodies the report of our project work carried out by our team under the guidance of **Mrs. Shruthi S, Assistant Professor, Department of CSE, SIET**, Tumakuru as partial fulfillment of requirements for the award of the degree in **Bachelor of Engineering in Computer Science & Engineering of Visvesvaraya Technological University, Belagavi**, during the academic year **2022-23**. The project has been approved as it satisfies the academic requirements in respect to the Project work.

Place: Tumakuru
Date: 26/05/2023

Student Name & Signature

Satyam Kumar Chaubey
[1SV19CS064] .....

Shafiya Khanum
[1SV19CS065] .....

Shah Hussain Ahamed S A
[1SV19CS066] .....

Sinchana B S
[1SV19CS071] .....

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: www.shritek.com
: shritekinnovations@gmail.com

Date: 22/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. SATYAM KUMAR CHAUBEY** bearing USN **1SV19CS064** Student of **Shridevi Institute of Engineering & Technology** has successfully completed his Project Work titled "A Secure System for Preventing Cyber Attacks Using GANs".

We wish every success in his career.

For ShriTEK Innovations

Authorized Signature

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Date: 22/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. SHAFIYA KHANUM** bearing USN **1SV19CS065** Student of **Shridevi Institute of Engineering & Technology** has successfully completed her Project Work titled "A Secure System for Preventing Cyber Attacks Using GANs".

We wish every success in her career.

For ShriTEK Innovations

Authorized Signature

ShriTEK Innovations Tumkur

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TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Mr. SHAH HUSSAIN AHAMED S A** bearing USN **1SV19CS066** Student of **Shridevi Institute of Engineering & Technology** has successfully completed his Project Work titled "A Secure System for Preventing Cyber Attacks Using GANs".

We wish every success in his career.

For ShriTEK Innovations

Authorized Signature

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Date: 22/05/2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. SINCHANA B S** bearing USN **1SV19CS071** Student of **Shridevi Institute of Engineering & Technology** has successfully completed her Project Work titled "A Secure System for Preventing Cyber Attacks Using GANs".

We wish every success in her career.

For ShriTEK Innovations

Authorized Signature

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ACKNOWLEDGEMENT

This project work will be incomplete without thanking the personalities responsible for this venture, which otherwise would not have become a reality.

We express our profound gratitude to **Dr. Narendra Viswanath,** Principal, S.I.E.T, for his moral support towards completing our project work.

We would like to thank Head of Department **Dr. Basavesha D**. Head, Department of CSE, SIET for providing all the support and facility.

We would like to thank my guide **Mrs. Shruthi S, Assistant Professor,** Department of computer Science and Engineering, SIET for her help, sharing her technical expertise and timely advice.

We whole heartedly thank, **Mr. Girish L,** Assistant Professor, Project coordinator, Department of Computer Science and Engineering, for the support.

We would like to express our sincere gratitude to all teaching and non-teaching faculty of the department of CSE for guiding us throughout the course of this project by giving valuable suggestion and encouragement.

By,

Satyam Kumar Chaubey [1SV19CS064]

Shafiya Khanum [1SV19CS064]

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ABSTRACT

Cybersecurity threats have become increasingly sophisticated, requiring advanced techniques for effective detection and mitigation. Generative Adversarial Networks (GANs) and deep learning algorithms have emerged as promising approaches for cyber-attack detection due to their ability to learn complex patterns from large datasets. This abstract provides an overview of the current state of research on cyber-attack detection using GANs and deep learning.

The abstract begins by introducing the fundamental concepts of GANs and deep learning, including their architecture and training mechanisms. It then reviews existing literature on the use of GANs and deep learning for cyber-attack detection, covering various types of attacks such as malware, intrusion, and phishing attacks. The abstract discusses the advantages of using GANs and deep learning, including their ability to capture complex and evolving attack patterns, adaptability to changing attack strategies, and potential for real-time detection.

However, challenges associated with using GANs and deep learning for cyber-attack detection are also highlighted, including the need for large and diverse datasets, the interpretability of model outputs, and vulnerabilities to adversarial attacks. The abstract also discusses potential future research directions, such as incorporating domain-specific knowledge, developing explainable models, and addressing ethical considerations.

In conclusion, this abstract presents an overview of the current research on cyber-attack detection using GANs and deep learning, highlighting their advantages and challenges. It provides a foundation for further research in the field of cybersecurity and underscores the importance of leveraging advanced techniques like GANs and deep learning for effective cyber-attack detection in today's evolving threat landscape

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"Jnana Sangama", Belagavi-560014, Karnataka

A PROJECT REPORT ON

"A SECURE SYSTEM FOR PREVENTING CYBER ATTACKS USING GANS"

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE

BACHELOR OF ENGINEERING
IN
COMPUTER SCIENCE & ENGINEERING

Submitted By

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2022-23