

**A FLEXIBLE HYBRID BEHAVIOR DYNAMIC  
METHODOLOGY FOR NETWORK INTRUSION  
DETECTION USING CONVOLUTIONAL NEURAL  
NETWORK**

**A PROJECT REPORT**

*Submitted by*

**VISWANATH VS [RA1911003020012]  
SURENDHARAN TG [RA1911003020021]  
NAVEEN PK [RA1911003020054]**

*Under the guidance of*

**Ms. P. JAYALAKSHMI ,M.E**

(Assistant Professor, Department of Computer Science and Engineering)

*in partial fulfilment for the award of the degree*

**BACHELOR OF TECHNOLOGY**

*in*

**COMPUTER SCIENCE AND ENGINEERING**

*of*

**FACULTY OF ENGINEERING AND TECHNOLOGY**



**SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**RAMAPURAM CAMPUS, CHENNAI -600089**

**MAY 2023**

# **SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**(Deemed to be University U/S 3 of UGC Act, 1956)**

## **BONAFIDE CERTIFICATE**

Certified that this project report titled “**A FLEXIBLE HYBRID BEHAVIOR DYNAMIC METHODOLOGY FOR NETWORK INTRUSION DETECTION USING CONVOLUTIONAL NEURAL NETWORK**” is the bonafide work of **VISWANATH V S [RA1911003020012]**, **SURENDHARAN T G [RA1911003020021]**, **NAVEEN PK [RA1911003020054]** who carried out the project work under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form any other project report or dissertation on the basis of which a degree or award was conferred on an occasion on this or any other candidate.

**SIGNATURE**

**Ms. P. JAYALAKSHMI**

**Assistant Professor,**

Computer Science and Engineering,  
SRM Institute of Science and Technology,  
Ramapuram Campus, Chennai.

**SIGNATURE**

**Dr. K. RAJA, M.E., Ph.D.,**

**Professor and Head**

Computer Science and Engineering,  
SRM Institute of Science and Technology,  
Ramapuram Campus, Chennai.

Submitted for the project viva-voce held on .....at SRM Institute of Science and Technology, Ramapuram Campus, Chennai -600089.

**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

# **SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**RAMAPURAM, CHENNAI – 89**

## **DECLARATION**

We hereby declare that the entire work contained in this project report titled **“A FLEXIBLE HYBRID BEHAVIOR DYNAMIC METHODOLOGY FOR NETWORK INTRUSION DETECTION USING CONVOLUTIONAL NEURAL NETWORK”** has been carried out by **VISWANATH V S [RA1911003020012], SURENDHARAN T G [RA1911003020021], NAVEEN PK [RA1911003020054]** at SRM Institute of Science and Technology, Ramapuram Campus, Chennai- 600089, under the guidance of **Ms. P. JAYALAKSHMI, Assistant Professor**, Department of Computer Science and Engineering.

**Place: Chennai**

**Date:**

**VISWANATH VS**

**SURENDHARAN TG**

**NAVEEN PK**



Department of Computer Science and Engineering

**SRM Institute of Science & Technology**

**Own Work Declaration Form**

This sheet must be filled in (each box ticked to show that the condition has been met). It must be signed and dated along with your student registration number and included with all assignments you submit – work will not be marked unless this is done.

To be completed by the student for all assessments

**Degree/ Course** : B. Tech

**Student Name** : Viswanath VS, Surendharan TG, Naveen PK

**Registration Number** : RA1911003020012, RA1911003020021, RA1911003020054

**Title of Work** : A Flexible Hybrid Behavior Dynamic Methodology for Network Intrusion Detection using Convolutional Neural Network

I / We hereby certify that this assessment compiles with the University's Rules and Regulations relating to Academic misconduct and plagiarism, as listed in the University Website, Regulations, and the Education Committee guidelines.

I / We confirm that all the work contained in this assessment is my / our own except where indicated, and that I / We have met the following conditions:

- Clearly references / listed all sources as appropriate
- Referenced and put in inverted commas all quoted text (from books, web, etc)
- Given the sources of all pictures, data etc. that are not my own
- Not made any use of the report(s) or essay(s) of any other student(s) either past or present
- Acknowledged in appropriate places any help that I have received from others (e.g. fellow students, technicians, statisticians, external sources)
- Compiled with any other plagiarism criteria specified in the Course handbook / University website

I understand that any false claim for this work will be penalised in accordance with the University policies and regulations.

**DECLARATION:**

I am aware of and understand the University's policy on Academic misconduct and plagiarism and I certify that this assessment is my / our own work, except where indicated by referring, and that I have followed the good academic practices noted above.

If you are working in a group, please write your registration numbers and sign with the date for every student in your group.

RA1911003020012

RA1911003020021

RA1911003020054

## **ACKNOWLEDGEMENT**

We place on record our deep sense of gratitude to our lionized Chairman **Dr. R. SHIVAKUMAR** for providing us with the requisite infrastructure throughout the course.

We take the opportunity to extend our hearty and sincere thanks to our Dean, **Dr.M.MURALI KRISHNA, B.E., M.Tech., Ph.D., MISTE, FIE, C.Engg.**, for maneuvering us into accomplishing the project.

We take the privilege to extend our hearty and sincere gratitude to the Professor and Head of the Department, **Dr. K. RAJA, M.E., Ph.D.**, for his suggestions, support and encouragement towards the completion of the project with perfection.

We express our hearty and sincere thanks to our guide **Ms. P. JAYALAKSHMI, M.E., Assistant Professor**, Computer Science and Engineering Department for her encouragement, consecutive criticism and constant guidance throughout this project work.

Our thanks to the teaching and non-teaching staff of the Computer Science and Engineering Department of SRM Institute of Science and Technology, Ramapuram Campus, for providing necessary resources for our project.

**VISWANATH VS**

**SURENDHARAN TG**

**NAVEEN PK**