

CODETECT: FINANCIAL FRAUD DETECTION

*A project report submitted in partial fulfillment of the requirements
for the award of the Degree of*

BACHELOR OF TECHNOLOGY

In

COMPUTER SCIENCE AND ENGINEERING

Submitted by:

MOHAN SAI BISAI
Regd. No.15811A0547

YARRA KUMAR SREE
Regd.No.15811A0574

YESHWANTH ARUN KUMAR
Regd.No.16815A0505

P.PAVAN KUMAR
Redg.No.16815A0507

Under the guidance of

MR.N.V.ASHOK KUMAR (M.TECH)
Associate professor

Department of Computer Science and Engineering



AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & Permanently affiliated to JNTU Kakinada)

(Accredited by NAAC, UGC & NBA, AICTE)

MAKAVARAPALEM, NARSIPATNAM,

VISAKHAPATNAM DIST

(2015-2019)

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi & permanently affiliated to JNTU Kakinada)

(Accredited by NAAC, UGC & NBA, AICTE)

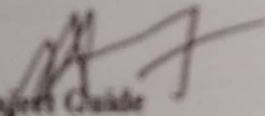
MAKAVARAPALEM, VASIHAPATNAM,

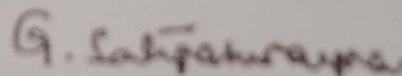
VISAKHAPATNAM-501113




CERTIFICATE

This is to certify that the project entitled "CODETECT FINANCIAL FRAUD DETECTION WITH ANOMALY FEATURE DETECTION" in partial fulfillment for the degree of Bachelor of Technology in COMPUTER SCIENCE AND ENGINEERING, at AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, MAKAVARAPALEM, VISAKHAPATNAM is an bonafied work carried out by MOHAN SAI BISAI (15411A0547), Y.KUMAR SREE(15411A0574), YESHWANTH ARUN KUMAR (16413A0505), P.PAVANKUMAR(16413A0507) under the guidance and supervision during 2016-2019.


Project Guide


Head of the Department


External Examiner

ABSTRACT

Financial fraud, such as money laundering, is known to be a serious process of crime that makes illegitimately obtained funds go to terrorism or other criminal activity. This kind of illegal activities involve complex networks of trade and financial transactions, which makes it difficult to detect the fraud entities and discover the features of fraud. Fortunately, trading/transaction network and features of entities in the network can be constructed from the complex networks of the trade and financial transactions. The trading/transaction network reveals the interaction between entities, and thus anomaly detection on trading networks can reveal the entities involved in the fraud activity; while features of entities are the description of entities, and anomaly detection on features can reflect details of the fraud activities. Thus, network and features provide complementary information for fraud detection, which has potential to improve fraud detection performance. However, the majority of existing methods focus on networks or features information separately, which does not utilize both information. In this paper, we propose a novel fraud detection framework, CoDetect, which can leverage both network information and feature information for financial fraud detection. In addition, the CoDetect can simultaneously detecting financial fraud activities and the feature patterns associated with the fraud activities. Extensive experiments on both synthetic data and real-world data demonstrate the efficiency and the effectiveness of the proposed framework in combating financial fraud, especially for money laundering.

Index Terms—Anomaly feature detection, CoDetect, financial fraud.