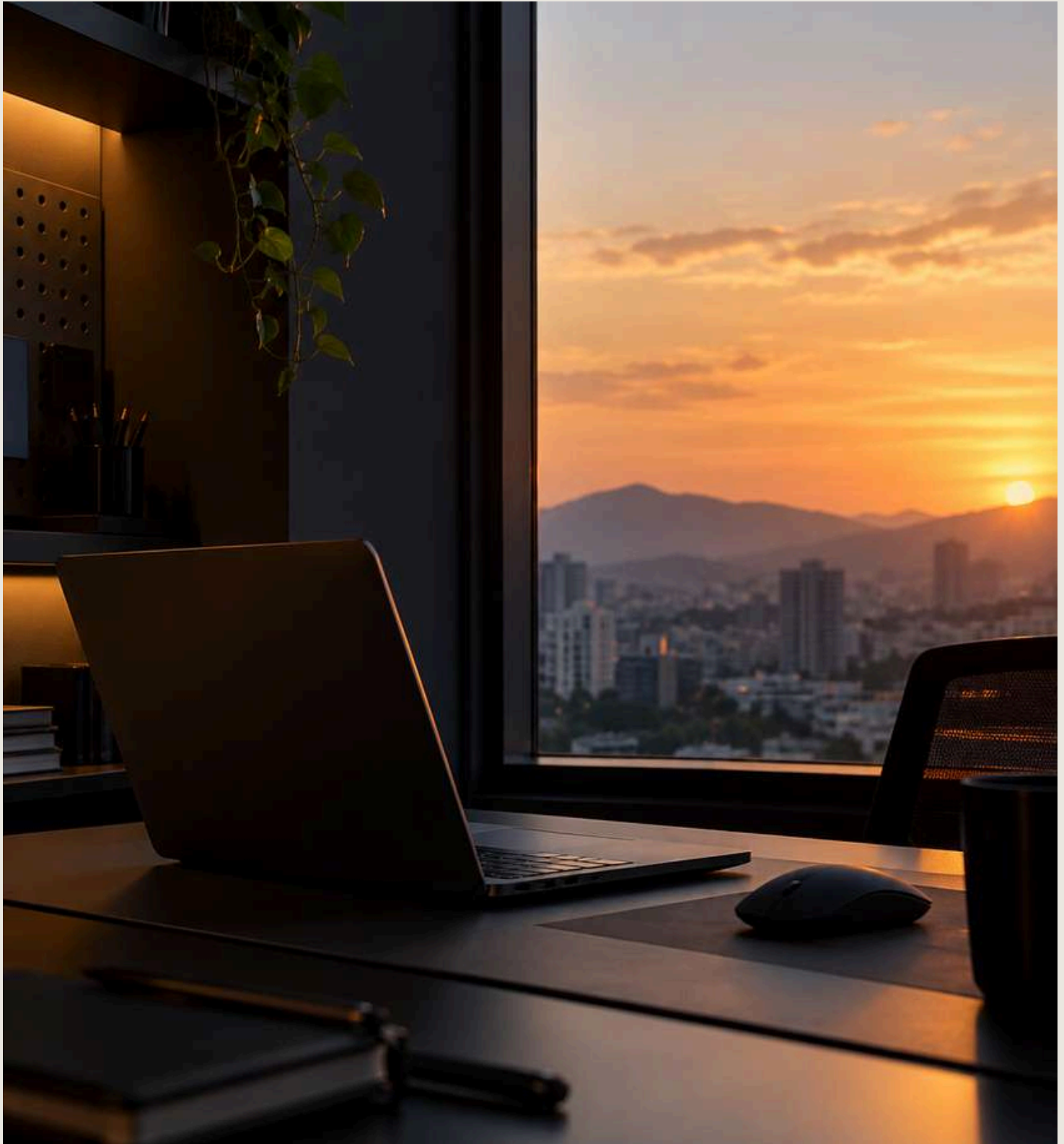




DEPARTMENT OF
INFORMATION TECHNOLOGY

PROTO IT

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TABLE OF CONTENTS

01	SECURING DATA IN CLOUD USING CRYPTOGRAPHY	04
02	AUTHENTICATION AND TRACKING METHOD FOR COUNTERFEIT MEDICATIONS BASED ON BLOCKCHAIN	05
03	CRYPTO-CURRENCY PRICE PREDICTION USING MACHINE LEARNING	06
04	BLOCKCHAIN TECHNOLOGY TO LINK WATER, ELECTRICITY, ROAD AND GAS WORKS	07
05	DEEP LEARNING BASED SOFTWARE SOLUTION USING BIO-INSPIRED OBJECTS TO DETECT ILLICIT DRUG TRAFFICKING IN DARK WEB	08
06	DETECTING CARDIOVASCULAR DISEASES IN DIABETIC PATIENTS USING MACHINE LEARNING	09

SECURING DATA IN CLOUD USING CRYPTOGRAPHY

Based on the structure of hybrid encryption algorithm, this paper proposes an area-saving hybrid AES RSA encryption module which can be integrated into network processing unit system. In the implementation of the algorithm, combined with the advantages of reconfigurable technology and traditional algorithms, the reconfigurable computing module which is compatible with the two algorithms is designed. The rapid adoption of cloud storage services has revolutionized the way data is stored and accessed. However, ensuring the security of data stored in the cloud remains a significant concern. This project aims to address this issue by exploring the use of cryptographic techniques to secure data in cloud storage. The project objectives include evaluating different cryptographic algorithms, implementing encryption and decryption mechanisms, assessing the effectiveness of cryptographic techniques in safeguarding data confidentiality, integrity, and authentication, identifying vulnerabilities and proposing countermeasures, and providing recommendations for enhanced security practices. Through this project, valuable insights will be gained to mitigate security risks and enhance the protection of sensitive data in the cloud.



- AGNEI KUMAR TL — GWE19IT002
- ANAKHA VIJAY — TOC19IT004
- DEVUKRISHNA S — GWE19IT005
- EMELDA MARIA MERSMIN — TOC19IT009

AUTHENTICATION AND TRACKING METHOD FOR COUNTERFEIT MEDICATIONS BASED ON BLOCKCHAIN



05

Without a reliable trust system and robust oversight, syndicates can simply produce fake medications. It becomes urgent to ensure subpar pharmaceuticals when life-critical healthcare shifts. Because fake medicine has devastating effects and a fatal impact on the human body. We suggested a blockchain-based drug tracing system to find fake medications. From the manufacturer business to the patients hand, our technology can identify inferior and abnormal medications. Smartphones can also use QR (Quick Response) codes to check for expired and faulty medications on the market. The system might become more trustworthy and transparent thanks to blockchain security. This study uses blockchain technology to guarantee medicine quality, transaction security and data safety.

- AVANI N S — GWE19IT004
- FATHIMA SULTHANA — TOC19IT011
- MEENAKSHI MANGAESH — TOC19IT015
- NITIN BABU — TOC19IT016



BLOCKCHAIN TECHNOLOGY TO LINK WATER, ELECTRICITY, ROAD AND GAS WORKS

BY

- EBIN JOSEPH .K — GWE19IT006
- GEORGY BOBAN — TOC19IT012
- JEFIN JOSE — TOC19IT013
- SIDDHARTH SANTHOSH — TOC19IT018

The development of Blockchain technology in e-government still needs discussion in different aspects; this technology offers a new method for delivering and managing public services, and there remains a need to establish standards, deploy solid management systems and ensure adequate security to make sure the services and platform are reliable, authoritative and supportive of long term preservation. Blockchain has the potential to change Indian society in many aspects. Its development still has both opportunities and risks. However There is still a need for Blockchain companies and market administrators to actively collaborate with each other, implement Blockchain operations, and introduce innovative solutions. Therefore our project introduces a new idea which supports the government in the field of services like water ,Gas, Electric work by collaborating them using Blockchain technology.

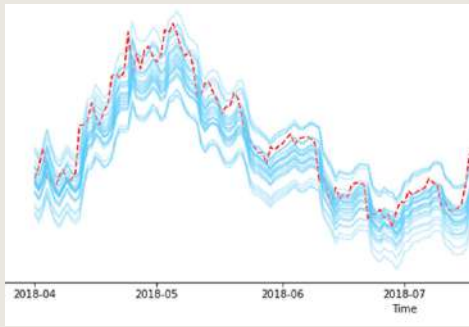




DETECTING CARDIOVASCULAR DISEASES IN DIABETIC PATIENTS USING MACHINE LEARNING

Cardiovascular disease (CVD) is one of the most overlooked complications associated with diabetes. Cardiovascular diseases (CVDs) are the leading cause of death globally. An estimated 17.9 million people died from CVDs in 2019, representing 32% of all global deaths. Of these deaths, 85% were due to heart attack and stroke. Over three quarters of CVD deaths take place in low- and middle-income countries. Out of the 17 million premature deaths (under the age of 70) due to non-communicable diseases in 2019, 38% were caused by CVDs. Most cardiovascular diseases can be prevented by addressing behavioural risk factors such as tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol. It is important to detect cardiovascular disease as early as possible. A approach is proposed herein to investigate the feasibility of using heart rate variability (HRV) features over 24 hours embedded within machine learning algorithms to provide a complete screening for patients suffering from CVD. HRV features were extracted from every 5-minute segment of the HRV signal and used as input to four machine learning algorithms for hourly training and testing. A complete hierarchical step by step diagnosis procedure (4 tests) was developed; namely test 1 to check for being healthy or diabetic; test 2 to check for any microvascular complications test 3 to check for presence of only CVD; test 4 to check for combined or multiple complications along with CVD.

- EMIN MARIYA — TOC19IT010
- MARY LIZ — TOC19IT014
- DEVEENA MARY WILSON —
TOC19IT007
- AKHILA PRAKASHAN —
GWE19IT003



CRYPTO-CURRENCY PRICE PREDICTION USING MACHINE LEARNING

The popularity and importance of cryptocurrency, along with its relevance, has been growing in the recent years. Many organizations throughout the world have acknowledged the importance of adapting to this technology to avail the various numerical benefits virtually, with rapid advances seen in this direction. Price prediction happens to be one of the biggest challenges in today's financial market situation, as the dilemma to buy or sell cryptocurrency is an interesting challenge faced by traders. Since the past few years, it has reached unparalleled highs leading to theories explaining the trend in its growth. The idea of whether the cryptocurrencies' movements and momentary fluctuations can be predicted, has kept investors, researchers and other economists very occupied as of late. In order to make these decisions in the crypto market, it is necessary to have efficient and reliable tools of price prediction, profitability and risk assessment, at least for the short-term time range. We can achieve this by using machine learning models such as LSTM (Long Short-Term Memory), which can learn long term dependencies. The key factors used are available price, close price, high price, low price, volume and market cap with the interdependencies amid some cryptocurrencies, thus centers on evaluating vital features that influence the trade's unpredictability by applying the model to increase the effectiveness of this process.

- ADNAN IRSHAD — TOC19IT002
- ALEN SAJU — TOC19IT003
- ARAVIND MADHU — TOC19IT005
- ARJUN V — TOC19IT006



DEEP LEARNING BASED SOFTWARE SOLUTION USING BIO-INSPIRED OBJECTS TO DETECT ILLICIT DRUG TRAFFICKING IN DARK WEB



The Dark Web is the darkest and most anonymous part of the Internet, where many illegal activities, including illicit trafficking in drugs, take place to a very large extent. Tracking of such activities is quite difficult from a law enforcement perspective given the inherent anonymity and volume of content on the dark web. Currently there is no efficient system to detect and monitor such activities in dark web.

So, we thought of utilizing data analytics and deep learning techniques for making an intelligent system which can crawl through the dark web to catalogue active and genuine darknet markets selling drugs, identify drug traffickers on dark net based in India and the drugs they offer for sale and collect the account and server hosting details of the drug traffickers across the Dark Web. Furthermore, these findings are handed over to the law enforcement. Hence, this leads to the curtailing of drug abusers in our country and turns our nation into a drug - free motherland. Development of the proposed System includes different steps like Data collection, Data processing, training and testing Deep learning algorithm using already available datasets, model building and implementation, designing an efficient dark web crawler, performance analysis etc.

- DEVIKA J NAIR — TOC19IT008
- PRIYANKA PRINCE K P — TOC19IT017
- STEEV JOHN — TOC19IT019



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TECHNICAL ASSISTANT
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