# EAGLE ENCRYPTOR – A DESKTOP APPLICATION

A Project Report submitted in partial fulfillment of the requirements for the award of the degree of

**Bachelor of Technology**

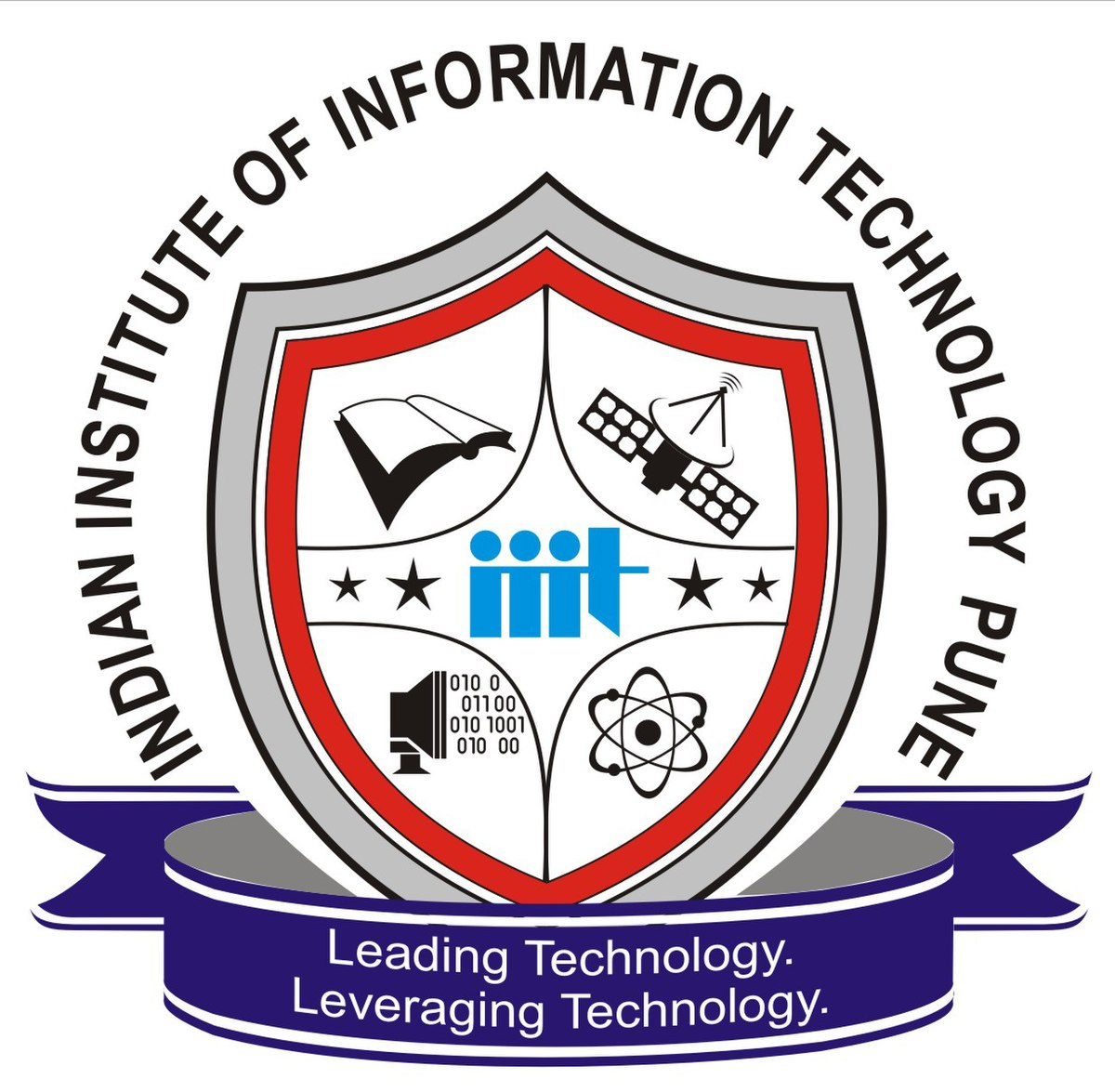
### in

**Computer Science and Engineering**

by

### Deepesh Vikas Patil (112215055)

### Semester: 4



#### Department of Computer Science and Engineering

#### 

#### Indian Institute of Information Technology, Pune

**(An Institute of National Importance by an Act of Parliament)**

#### May 2024

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This is to certify that the project report entitled **“Eagle Encryptor – A Desktop Application”** submitted by **Deepesh Vikas Patil** bearing the **MIS No: 112215055**, in completion of his project work is accepted for the project report submission in partial fulfillment of the requirements for the award of the degree of **Bachelor of Technology** in the **Department of Computer Science and Engineering**, Indian Institute of Information Technology, Pune (IIIT Pune), during the academic year **2023-24**.

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Project Guide Head of the Department

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# ACKNOWLEDGMENT

Completing this project has been a challenging yet rewarding endeavor, and I would like to express my gratitude to those who have supported and motivated me along the way.

Firstly, I extend my heartfelt thanks to our honorable Director, **Prof. O.G. Kakde**, for providing continuous support and encouragement throughout this project. His belief in my abilities has been a driving force behind my efforts.

I am grateful for the guidance and support I received from various faculty members in the Department of CSE/ECE. Their expertise and willingness to assist whenever needed have been invaluable.

I would also like to thank the Head of Department, **Dr.** **Sanjeev Sharma** for creating an environment conducive to learning and innovation. Their leadership has inspired me to strive for excellence.

I am thankful to my classmates for their friendship and encouragement. Their moral support has been a constant source of motivation during challenging times.

Lastly, I express my appreciation to all those who have indirectly contributed to this project through their insights, discussions, and feedback. Your contributions have played a significant role in shaping the outcome.

Completing this project has been a significant milestone in my academic journey, and I am grateful for the support and encouragement I have received along the way.

Eagle Encryptor – A Desktop Application

## Abstract

"Eagle-Encryptor" is a Python-based file encryption and decryption tool designed to provide users with a secure and versatile solution for protecting their sensitive data. Developed by Deepesh Patil, the tool offers a wide range of functionalities for encrypting and decrypting various file types, including PDFs, DOCX documents, images, audio files, and Excel spreadsheets. The application employs robust encryption algorithms such as Triple DES, and Fernet symmetric key cryptography to ensure the confidentiality and integrity of the encrypted data.

Key features of Eagle-Encryptor include password protection for PDF files, seamless integration with MySQL databases for file management, and support for multiple file formats commonly used in today's digital environment. The user-friendly interface and intuitive command structure make it easy for users to encrypt and decrypt files with minimal effort. Additionally, the tool provides functionality for adding, viewing, and deleting files from the local file list stored in the MySQL database.

With its comprehensive set of features and strong emphasis on security, Eagle-Encryptor offers a reliable solution for individuals and organizations seeking to safeguard their sensitive information from unauthorized access and data breaches.

**Keywords**: file encryption, file decryption, PDF encryption, MySQL integration, data protection, encryption algorithms, file management, confidentiality, integrity.

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**Chapter 1**

**Introduction (All Headings: 17 Font Size, Times New Roman)**

## Overview of Work (First Sub-Heading, 14 Times New Roman)

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As the healthcare industry is recently shifting its focus from disease treatment the past to prevention, patients are demanding more effective and safe treatment and personalized treatment from medical care providers.To achieve this, it is necessary to comprehensively analyze and utilize patients’ lifelong data, medical image data, genetic data, medical literature data, and medical records in hospitals. There are limitations in diagnosing patients by analyzing the vast amounts of data through doctors’ cognitive judgment ability and effort, and environmental factors.

## Motivation of the Work

Studies have been actively conducted on AI technologies that assist and replace doctors to analyze patients’ data and support decision-making. Even for the same disease, doctors have huge differences in treatment and lack consistency.

Since healthcare determines a person’s life and diagnoses diseases, its diagnosis ac- curacy is very important. Patients’ confidence is increasing toward AI-based healthcare technology with fast computational power and high accuracy based on diagnosis evidence

Medical imaging technology in AI is one of the fields with the most active research.

Title

To diagnose a disease, medical images collect various parts inside and outside the human body through an image collecting device, and clinical or image medical specialists use the collected images for diagnosis by relying entirely on their visual cognitive ability and judgment..

However, such an existing method is being improved or replaced by AI [16]–[18]. Many studies are actively in progress because AI can recognize the characteristics of image data more accurately and faster than doctors.

In particular, the recent outbreak of an unprecedented COVID-19 pandemic has in- creased the interest in responding to diseases by using new technologies such as AI and data to detect chest diseases, leading to more active related studies

Line-Feature Analysis algorithm that converts high-quality, high-resolution original images into low-dimension data to reduce the data processing speed for accurate analysis. For the accuracy and reliability of the LFA algorithm proposed in this study, accuracy was measured in an experiment according to the edge detection algorithm, and the performance of the LFA-RNN model was compared with the existing learning model to confirm its performance.

[**1.3 Literature Review**](#_heading=h.3znysh7)

**1.4 Research Gap**

# Chapter 2

# Problem Statement

The biggest motivation of doing this paper is Now a days X-ray and CT in medicine use high-resolution images, they require high specification equipment and huge energy consumption due to high computation in learning and recognition, incurring huge costs to create an environment for operation. Thus, this paper proposes a chest X-ray outlier detection model which will decrease the working time.

**2.1. Research Objectives**

**2.2. Methodology of the Work**

# Chapter 3

# Analysis and Design

There’s a lot research based on chest X-Ray detection for COVID-19 detection -

* Deep Convolutional Approaches for the Analysis of COVID-19 Using Chest X-Ray Images From Portable Devices
* Deep Learning Approaches for Detecting COVID-19 From Chest X-Ray Images: A Survey by Hanan S.alghamdi

# Chapter 4

# Results and Discussion

* Our Research proposes a chest X-ray outlier detection model using dimension reduction and edge detection. Unlike the existing dimension reduction techniques, the proposed algorithm uses its own data as the standard for dimension reduction and always applies a consistent classification criterion.
  + In the existing techniques, classification criteria changed according to the number of learning data, class distribution, and type. However, this may degrade the performance of recognition by reanalyzing the classification criteria and using inefficient classification when applied to additional learning data and daily life data.
  + Moreover, it realizes the prediction of response to different treatment modalities because it can predict the pattern of cardiovascular complications.
  + Hence, considering their properties and multiple advantages, ELMs are recom- mended for such problems.
  + However, it should be noted while AI speeds up the methods to conquer COVID-19,

real experiments should happen because a full understanding of advantages and limita- tions of AI-based methods for COVID-19 is yet to be achieved, and novel approaches have to be in place for problems of this level of complexity.

* + The RNN, as alternatively called Auto Associative or Feedback Network, falls in the

category of LSTM in which a directed cycle is made through connections between units. Being a widely appreciated DL family, RNNs have succeeded to present promising results in a lot of machine learning and computer vision tasks. One important task to use this model, however, is the quantification of qualitative inputs such as country and location.

Title

Updating the model is possible because of the real-time data by LSTM with real-time learning capability. Utilization of the proposed LSTM model provides the opportunity of proposing the epidemiological model of the virus in different locations. The main objective of the proposed structure is to improve the accuracy and speed of recognition and classification of the issues caused by the virus by utilizing DL-based methods.

# Chapter 5

# Conclusion and Future Scope

The introduced conceptual structures and platforms in the research field of AI-based techniques, which are suitable for dealing with COVID-19 issues, have been studied in this paper. Different techniques have been developed, incorporating COVID-19’s diagnostic systems, such as RNN, LSTM, GAN, and ELM. The geographical issues, high-risk people, and recognizing and radiology were the main problems with COVID-19 and have been studied and discussed in this work. Also, we showed a mechanism for selecting the appropriate models of estimation and prediction of desired parameters using a number of clinical and non-clinical datasets. Considering these platforms assists AI experts to analyze huge datasets and help physicians train machines, set algorithms or optimize the analyzed data for dealing with the virus with more speed and accuracy. We discussed that they are desirable because of their potential for creating a workspace while AI experts and physicians could work side by side. However, it should be noted while AI speeds up the methods to conquer COVID-19, real experiments should happen because a full understanding of advantages and limitations of AI-based methods for COVID-19 is yet to be achieved, and novel approaches have to be in place for problems of this level of complexity.

# References

APA in-text citation style uses the author's last name and the year of publication, for example: **(Field, 2005)**. For direct quotations, include the page number as well, for example: (Field, 2005, p. 14)

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* **Reference List:** Brader, T. (2006). *Campaigning for hearts and minds: How emotional appeals in political ads work*. University of Chicago Press.
* **In-text:** (Brader, 2006)

**~ ​Book with Two Authors:**

* **Reference List:** Miller, T. E., & Schuh, J. H. (2005). *Promoting reasonable expectations: Aligning student and institutional views of the college experience.* Jossey-Bass.
* **In-text:** (Miller & Schuh, 2005)  
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* **Reference List:** Brock, J., & Arciuli, J. (2014). *Communication in autism* [eBook edition]*.* John Benjamins Publishing Company. https://doi.org/10.1007/978-1-4757-4806-2
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* White, C. (2006, April). The spirit of disobedience: An invitation to resistance. *Harper's Magazine, 312*(1871), 31-40.

**~ Journal Article:**

* Newman, J. L., Fuqua, D. R., Gray, E. A., & Simpson, D. B. (2006). Gender differences in the relationship of anger and depression in a clinical sample. *Journal of Counseling & Development*, *84*, 157-161.

**~ Newspaper Article:**

* Zernike, K. (2015, October 25). White House moves to limit school testing. *New York Times*, p. A1.
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*Two Cats Resting*



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Frey, J. P., Kendrick, R., Lowell, J. M., & Rothermel, J. M. (2006). *Energy*

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interactive qualifying project, Worcester Polytechnic Institute]. Digital WPI. <https://digital.wpi.edu/show/bg257f381>APA Citation Examples: Patents

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