



KJ'S EDUCATIONAL INSTITUTES

**TRINITY COLLEGE OF ENGINEERING AND RESEARCH PUNE**

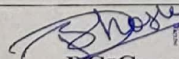
(Accredited by NAAC with A+ Grade Approved by AICTE & Affiliated to SPPU, Pune)

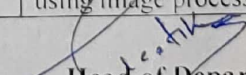
Sr. No. 25 & 27, Near. Khadi Machine Chowk, Kondhwa Annexe, Pune-48, Maharashtra

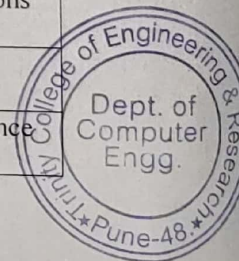
**DEPARTMENT OF COMPUTER ENGINEERING**

APF-24A	<b>Dissertation Title</b>	Academic Year: 2023-24
Issue No.:01		Semester: I
Revision No: 0		Course : Master of Engineering
Rev. Date: 05/05/2023		

ROLL NO.	NAME OF STUDENT	Guide Name	Co Guide Name	Dissertation Title
MC1001	SHIVATARE ARATI ASHOK	Dr. Geetika Narang	Prof. Sai Takwale	Expert Brain Tumor Detection And Classification System Using Two Level Diagnosis
MC1002	KHESE PUNAM BHANUDAS	Dr. Sujeet More	Prof. Amruta Sarudkar	A Blockchain Based Approach For Drug Traceability In Healthcare Supply Chain
MC1003	KADAM JYOTSNA VITTHALRAO	Prof. Sneha Tirth	Prof. Sai Takwale	Intrusion Detection System Using Blockchain Technology
MC1004	JADHAV REKHA SAHEBRAO	Prof. Prasad Bhosle	Prof. Rutika Shah	Early Diagnosis And Detection Of Parkinson's Disease Using CNN Based Approach
MC1005	SASTE RUTUJA RAJENDRA	Prof. Saleha Saudagar	Prof. Rutika Shah	Agriculture food supply management using block chain based and Deep Reinforcement Learning
MC1006	ANKITA ASHOK DHAMDHERE	Prof. Rupali Maske	Prof. Amruta Sarudkar	3D MR Images Processing Using Machine Learning Technique For Detection Of Alzheimer's Disease
MC1007	KAMTHE KIRTI TANAJI	Prof. Prasad Bhosle	Prof. Rutika Shah	Elevating QR code security through enhanced visual secret sharing
MC1008	SHAIKH TAMANNA ANWAR	Dr. Sujeet More	Prof. Amruta Sarudkar	Real Time Hand Gesture Recognition System
MC1009	PALAKAR NEELAM MAHAMMAD AHANIF	Prof. Sneha Tirth	Prof. Sai Takwale	The Model For Dowry Death Legal Predictions Using Machine Learning Algorithms
MC1010	SOLAPURE SANTOSHI VITTHALRAO	Prof. Rupali Maske	Prof. Amruta Sarudkar	Diabetic Retinopathy Using Deep Learning Methodology
MC1011	GAIKWAD NEELAM ANANT	Prof. Saleha Saudagar	Prof. Rutika Shah	Animal image detection for collision avoidance using image processing in machine learning

  
**P.G. Coordinator**  
Computer Engineering  
Trinity College of Engineering & Research

  
**Head of Department**





## CERTIFICATE

This is certify that the Seminar-II report entitles

### “MEDICAL DATA APPLIED QR CODE FOR PRIVACY PROTECTION USING AES ALGORITHM, ONE TIME PASSWORD PROTOCOL AND QR CODE GENERATOR ALGORITHM”

submitted by

**KIRTI T. KAMTHE**

This is certify that the Dissertation -II “MEDICAL DATA APPLIED QR CODE FOR PRIVACY PROTECTION USING AES ALGORITHM, ONE TIME PASSWORD PROTOCOL AND QR CODE GENERATOR ALGORITHM”, submitted by Kirti T. Kamthe is a record of bonafide work carried out by him, in the partial fulfilment of the requirement for the award of Degree of Master of Engineering (Computer Engineering) at TRINITY COLLEGE OF ENGINEERING AND RESEARCH, Pune under the University of Pune. This work is done during year 2022-2023, under our guidance.

**Prof. Prasadbhosle**  
**Internal Seminar**  
**Guide**

**Prof. Rutika Shah**  
**Co-Guide**

**Prof. Prasadbhosle**  
**ME. Coordinator**

**(Dr. Geetika Narang)**  
**HOD, Computer Department**

**(Dr. Abhijeet Auti)**  
**Principal TCOER**

Examiner:

Date: .... / .... / .....

**ABSTRACT:**

Medical data are an ever growing source of information generated from hospitals consisting of patient records in the form of hard copies which can be made easier and convenient by using QR Code of the patient details. Our aim is to build a Health-care Portal system which will provide the features like clinical management, patient records, disease prediction and generate QR Code for every patient as per there updated disease information.

There is a growing concern in the medical field, both on the side of physicians and other care providers as well as on the insurance and payer side about the impact medication non-adherence has on health care outcomes and costs. The widespread uses of smartphones at an unprecedented rate have revolutionized the way people access to information particularly in the health care sector. The use of mobile healthcare applications is a dynamic field and has received great attentions lately. This development provides mobile technology more attractive for mobile health (m-health) applications. The m-health is defined as a wireless telemedicine involving the use of mobile telecommunications and multimedia technologies and their integration with mobile healthcare delivery systems. Including human in authentication protocols, while guaranteeing, is not simple in light of their restricted capacity of calculation and remembrance. We exhibit how careful visualization outline can improve the security as well as the convenience of authentication. We propose health care service for generate QR Code through web/android application.

**Keywords:** QR (Quick Response) Code, healthcare, mobile health (m-health), Health Monitoring, QR Code Technology, Medical Records, etc.



## CERTIFICATE

This is certify that the project report entitles  
“Heart Disease prediction using machine learning”

Submitted by

**Mrs.Palakar Neelam Mahammadahanif**

Exam No: 1292

This is certify that the Dissertation entitled “**Model For Dowry Death Legal Predictions Using Machine Learning Algorithms**”, submitted by **Mrs.Palakar Neelam Mahammadahanif** is a record of bonafide work carried out by her, in the partial fulfillment of the requirement for the award of Degree of Master of Engineering (Computer Engineering) at TRINITY COLLEGE OF ENGINEERING AND RESEARCH, Pune under the University of Pune. This work is done during year 2023-24, under our guidance.

Prof.Sai Takwale  
Internal Project Co-Guide

Prof.Sneha Tirth  
Internal Project Guide

Prof. Prasad Bhosle  
Project Coordinator

Dr. Mrs. Geetika Narang  
HOD, Computer Department

Dr. A. B. Auti  
Principal TCOER

Examiner:

Date: 05/06/2024

### ABSTRACT

Dowry death is violence by the husband and his family with a motive of extortion of the gifts and other demanded from time to time against a women . Dowry deaths are significant social issue , particularly in some regions of the world, where the practice of giving dowry is prevalent. The existing model have condense the problem of pending cases by decreasing the number of cases before it reaches the court. The existing model focuses on cases related to 'dowry death'. By predicting judicial argument based analysis using the support vector Machine algorithm to find its accuracy. The proposed model based on K Nearest Neighbors algorithm, Decision tree, Linear Regression, Naïve Bayes , Random forest to find its accuracy and prediction. The objective of this model is to predict whether a person is guilty or not, using number of a supervised learning approach. The model shows the performance and higher accuracy than that of existing model with K Nearest Neighborsclassifier,NaïveBayesclassifieretc.

1. INTRODUCTION	12
2. RELATED WORK	13
3. METHODOLOGY	15
4. RESULTS AND DISCUSSION	18
5. CONCLUSION	18
6. REFERENCES	18
7. APPENDIX	18
8. ACKNOWLEDGEMENT	18
9. BIOGRAPHY	18
10. CONTACT INFORMATION	18
11. DECLARATION	18
12. CERTIFICATE	18
13. APPENDIX	18
14. ACKNOWLEDGEMENT	18
15. BIOGRAPHY	18
16. CONTACT INFORMATION	18
17. DECLARATION	18
18. CERTIFICATE	18
19. APPENDIX	18
20. ACKNOWLEDGEMENT	18
21. BIOGRAPHY	18
22. CONTACT INFORMATION	18
23. DECLARATION	18
24. CERTIFICATE	18
25. APPENDIX	18
26. ACKNOWLEDGEMENT	18
27. BIOGRAPHY	18
28. CONTACT INFORMATION	18
29. DECLARATION	18
30. CERTIFICATE	18
31. APPENDIX	18
32. ACKNOWLEDGEMENT	18
33. BIOGRAPHY	18
34. CONTACT INFORMATION	18
35. DECLARATION	18
36. CERTIFICATE	18
37. APPENDIX	18
38. ACKNOWLEDGEMENT	18
39. BIOGRAPHY	18
40. CONTACT INFORMATION	18
41. DECLARATION	18
42. CERTIFICATE	18
43. APPENDIX	18
44. ACKNOWLEDGEMENT	18
45. BIOGRAPHY	18
46. CONTACT INFORMATION	18
47. DECLARATION	18
48. CERTIFICATE	18
49. APPENDIX	18
50. ACKNOWLEDGEMENT	18
51. BIOGRAPHY	18
52. CONTACT INFORMATION	18
53. DECLARATION	18
54. CERTIFICATE	18
55. APPENDIX	18
56. ACKNOWLEDGEMENT	18
57. BIOGRAPHY	18
58. CONTACT INFORMATION	18
59. DECLARATION	18
60. CERTIFICATE	18
61. APPENDIX	18
62. ACKNOWLEDGEMENT	18
63. BIOGRAPHY	18
64. CONTACT INFORMATION	18
65. DECLARATION	18
66. CERTIFICATE	18
67. APPENDIX	18
68. ACKNOWLEDGEMENT	18
69. BIOGRAPHY	18
70. CONTACT INFORMATION	18
71. DECLARATION	18
72. CERTIFICATE	18
73. APPENDIX	18
74. ACKNOWLEDGEMENT	18
75. BIOGRAPHY	18
76. CONTACT INFORMATION	18
77. DECLARATION	18
78. CERTIFICATE	18
79. APPENDIX	18
80. ACKNOWLEDGEMENT	18
81. BIOGRAPHY	18
82. CONTACT INFORMATION	18
83. DECLARATION	18
84. CERTIFICATE	18
85. APPENDIX	18
86. ACKNOWLEDGEMENT	18
87. BIOGRAPHY	18
88. CONTACT INFORMATION	18
89. DECLARATION	18
90. CERTIFICATE	18
91. APPENDIX	18
92. ACKNOWLEDGEMENT	18
93. BIOGRAPHY	18
94. CONTACT INFORMATION	18
95. DECLARATION	18
96. CERTIFICATE	18
97. APPENDIX	18
98. ACKNOWLEDGEMENT	18
99. BIOGRAPHY	18
100. CONTACT INFORMATION	18
101. DECLARATION	18
102. CERTIFICATE	18
103. APPENDIX	18
104. ACKNOWLEDGEMENT	18
105. BIOGRAPHY	18
106. CONTACT INFORMATION	18
107. DECLARATION	18
108. CERTIFICATE	18
109. APPENDIX	18
110. ACKNOWLEDGEMENT	18
111. BIOGRAPHY	18
112. CONTACT INFORMATION	18
113. DECLARATION	18
114. CERTIFICATE	18
115. APPENDIX	18
116. ACKNOWLEDGEMENT	18
117. BIOGRAPHY	18
118. CONTACT INFORMATION	18
119. DECLARATION	18
120. CERTIFICATE	18
121. APPENDIX	18
122. ACKNOWLEDGEMENT	18
123. BIOGRAPHY	18
124. CONTACT INFORMATION	18
125. DECLARATION	18
126. CERTIFICATE	18
127. APPENDIX	18
128. ACKNOWLEDGEMENT	18
129. BIOGRAPHY	18
130. CONTACT INFORMATION	18
131. DECLARATION	18
132. CERTIFICATE	18
133. APPENDIX	18
134. ACKNOWLEDGEMENT	18
135. BIOGRAPHY	18
136. CONTACT INFORMATION	18
137. DECLARATION	18
138. CERTIFICATE	18
139. APPENDIX	18
140. ACKNOWLEDGEMENT	18
141. BIOGRAPHY	18
142. CONTACT INFORMATION	18
143. DECLARATION	18
144. CERTIFICATE	18
145. APPENDIX	18
146. ACKNOWLEDGEMENT	18
147. BIOGRAPHY	18
148. CONTACT INFORMATION	18
149. DECLARATION	18
150. CERTIFICATE	18
151. APPENDIX	18
152. ACKNOWLEDGEMENT	18
153. BIOGRAPHY	18
154. CONTACT INFORMATION	18
155. DECLARATION	18
156. CERTIFICATE	18
157. APPENDIX	18
158. ACKNOWLEDGEMENT	18
159. BIOGRAPHY	18
160. CONTACT INFORMATION	18
161. DECLARATION	18
162. CERTIFICATE	18
163. APPENDIX	18
164. ACKNOWLEDGEMENT	18
165. BIOGRAPHY	18
166. CONTACT INFORMATION	18
167. DECLARATION	18
168. CERTIFICATE	18
169. APPENDIX	18
170. ACKNOWLEDGEMENT	18
171. BIOGRAPHY	18
172. CONTACT INFORMATION	18
173. DECLARATION	18
174. CERTIFICATE	18
175. APPENDIX	18
176. ACKNOWLEDGEMENT	18
177. BIOGRAPHY	18
178. CONTACT INFORMATION	18
179. DECLARATION	18
180. CERTIFICATE	18
181. APPENDIX	18
182. ACKNOWLEDGEMENT	18
183. BIOGRAPHY	18
184. CONTACT INFORMATION	18
185. DECLARATION	18
186. CERTIFICATE	18
187. APPENDIX	18
188. ACKNOWLEDGEMENT	18
189. BIOGRAPHY	18
190. CONTACT INFORMATION	18
191. DECLARATION	18
192. CERTIFICATE	18
193. APPENDIX	18
194. ACKNOWLEDGEMENT	18
195. BIOGRAPHY	18
196. CONTACT INFORMATION	18
197. DECLARATION	18
198. CERTIFICATE	18
199. APPENDIX	18
200. ACKNOWLEDGEMENT	18
201. BIOGRAPHY	18
202. CONTACT INFORMATION	18
203. DECLARATION	18
204. CERTIFICATE	18
205. APPENDIX	18
206. ACKNOWLEDGEMENT	18
207. BIOGRAPHY	18
208. CONTACT INFORMATION	18
209. DECLARATION	18
210. CERTIFICATE	18
211. APPENDIX	18
212. ACKNOWLEDGEMENT	18
213. BIOGRAPHY	18
214. CONTACT INFORMATION	18
215. DECLARATION	18
216. CERTIFICATE	18
217. APPENDIX	18
218. ACKNOWLEDGEMENT	18
219. BIOGRAPHY	18
220. CONTACT INFORMATION	18
221. DECLARATION	18
222. CERTIFICATE	18
223. APPENDIX	18
224. ACKNOWLEDGEMENT	18
225. BIOGRAPHY	18
226. CONTACT INFORMATION	18
227. DECLARATION	18
228. CERTIFICATE	18
229. APPENDIX	18
230. ACKNOWLEDGEMENT	18
231. BIOGRAPHY	18
232. CONTACT INFORMATION	18
233. DECLARATION	18
234. CERTIFICATE	18
235. APPENDIX	18
236. ACKNOWLEDGEMENT	18
237. BIOGRAPHY	18
238. CONTACT INFORMATION	18
239. DECLARATION	18
240. CERTIFICATE	18
241. APPENDIX	18
242. ACKNOWLEDGEMENT	18
243. BIOGRAPHY	18
244. CONTACT INFORMATION	18
245. DECLARATION	18
246. CERTIFICATE	18
247. APPENDIX	18
248. ACKNOWLEDGEMENT	18
249. BIOGRAPHY	18
250. CONTACT INFORMATION	18
251. DECLARATION	18
252. CERTIFICATE	18
253. APPENDIX	18
254. ACKNOWLEDGEMENT	18
255. BIOGRAPHY	18
256. CONTACT INFORMATION	18
257. DECLARATION	18
258. CERTIFICATE	18
259. APPENDIX	18
260. ACKNOWLEDGEMENT	18
261. BIOGRAPHY	18
262. CONTACT INFORMATION	18
263. DECLARATION	18
264. CERTIFICATE	18
265. APPENDIX	18
266. ACKNOWLEDGEMENT	18
267. BIOGRAPHY	18
268. CONTACT INFORMATION	18
269. DECLARATION	18
270. CERTIFICATE	18
271. APPENDIX	18
272. ACKNOWLEDGEMENT	18
273. BIOGRAPHY	18
274. CONTACT INFORMATION	18
275. DECLARATION	18
276. CERTIFICATE	18
277. APPENDIX	18
278. ACKNOWLEDGEMENT	18
279. BIOGRAPHY	18
280. CONTACT INFORMATION	18
281. DECLARATION	18
282. CERTIFICATE	18
283. APPENDIX	18
284. ACKNOWLEDGEMENT	18
285. BIOGRAPHY	18
286. CONTACT INFORMATION	18
287. DECLARATION	18
288. CERTIFICATE	18
289. APPENDIX	18
290. ACKNOWLEDGEMENT	18
291. BIOGRAPHY	18
292. CONTACT INFORMATION	18
293. DECLARATION	18
294. CERTIFICATE	18
295. APPENDIX	18
296. ACKNOWLEDGEMENT	18
297. BIOGRAPHY	18
298. CONTACT INFORMATION	18
299. DECLARATION	18
300. CERTIFICATE	18



This is certify that Punam B. Khese has completed the Dissertation Stage-I work under my guidance and supervision. I have verified the work for its originality in documentation, problem statement, implementation, and results presented in the Dissertation Stage-I. Any reproduction of other necessary work is with the prior permission of the guide and included in the references.

## CERTIFICATE

This is certify that the Seminar report entitles

### “Securing Healthcare: A Blockchain Revolution For Drug Traceability”

submitted by

**Punam B. Khese**

**Exam No.**

This is certify that the Dissertation stage-I entitled “Securing Healthcare: A Blockchain Revolution For Drug Traceability”, submitted by Punam B. Khese is a record of bona-fide work carried out by her, in the partial fulfilment of the requirement for the award of Degree of Master of Engineering (Computer Engineering) at TRINITY COLLEGE OF ENGINEERING AND RESEARCH, Pune under the University of Pune. This work is done during year 2023-2024, under our guidance.

**Prof. Amruta Sarudkar**

**Internal project Co-Guide**

**Dr. Sujeet More**

**Internal Project Guide**

**Prof. Prosad Bhosale**

**ME Coordinator**

**(Dr. Geetika Narang)**

**HOD, Computer Department**

**(Dr. Abhijeet Auti)**

**Principal TCOER**

**Examiner:**

**Date:** 05/06/2024 AIDA Pune-23

M.E Computer Engineering, TCOER, Pune 2023-24

INDEX

ABSTRACT

The blockchain is generally defined as a decentralized system in which transactional or historical records are recorded, stored and maintained across a peer-to-peer network of personal computers called nodes. In other words, it's an immutable, public digital ledger which is a much akin to a database. The blockchain is indeed a powerful and disruptive technology that can cause a seismic shift in just about any industry.

A huge amount of data, generated by different applications in computer network, is growing up exponentially based on nonstop operational states. Such applications are generating an avalanche of information that is disruptive for predictable data processing and analytics functionality, which is perfectly handled by the cloud before explosion growth of Big Data. Blockchain technology alleviates the reliance on a centralized authority to certify information integrity and ownership, as well as mediate transactions and exchange of digital assets, while enabling secure and pseudo-anonymous transactions along with agreements directly between interacting parties. It possesses key properties, such as immutability, decentralization, and transparency that potentially address pressing issues in health-care, such as incomplete records at point of care and difficult access to patient's own health information. An efficient and effective healthcare system requires interoperability, which allows software apps and technology Platforms to communicate securely and seamlessly, exchange data, and use the exchanged data across health organizations and app vendors. Unfortunately, healthcare today suffers from fragmented data, delayed communications, and disparate workflow tools caused by the lack of interoperability. Blockchain offers the opportunity to enable access to longitudinal, complete, and tamper-aware medical records that are stored in fragmented systems in a secure and pseudo-anonymous fashion. The proposed work carried out blockchain implementation in distributed computing environment and it also provides the automatic recovery of invalid chain. Finally we focus our contribution part that is emergency medicine tracking system and give to valid patients. This also determines the impact of those security issues and possible solutions, providing future security-relevant directions to those responsible for designing, developing, and maintaining distributed systems.

**Keywords:-** Blockchain Technology, Decentralization / Decentralized System, Distributed Computing, Peer-to-Peer Network, Healthcare, etc.