



Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

## APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:02-05-2025

Department	COMPUTER APPLICATIONS	Application No.	2025010249
Area of Research	BIG DATA ANALYTIC AND IMAGE PROCCING	Research Mode	PART TIME

Name :SREELEKHA TK

Date of Birth / Age :28-08-1997 / 27 Years

Gender :FEMALE

Category :OBC

e-Mail ID :sreelehatk97@gmail.com

Mobile :+91 89430 27799



Father's/Husband's Name	UNNIKRISHNAN TK	Father's/Husband's Occupation	COOLIE
Family Income	200000	Residential Type	RURAL
Birth Place	SHORANUR	Mother Tongue	MALAYALAM
Religion	HINDU	Martial Status	SINGLE
Aadhaar No.	576165501234	PAN No.	KHFP0111A
Physically Challenged	NO	Type of Disability	-
<b>Address for Communication:</b> THEKKUMPARAMBIL (H) KAVALAPARA(PO) SHORNUR PALAKKAD DISTRICT KERALA INDIA Pin-679523		<b>Permenant Address:</b> THEKKUMPARAMBIL (H) KAVALAPARA(PO) SHORNUR PALAKKAD DISTRICT KERALA INDIA Pin-679523	

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
MCA	MASTER COMPUTER APPLICATIONS	APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY	2020	85.6	FIRST CLASS WITH DISTINCTION	REGULAR
BCA	BACHELOR COMPUTER APPLICATIONS	UNIVERSITY OF CALICUT	2018	75.3	FIRST CLASS	REGULAR

Experience					
Organization	Designation	Experience From	Experience TO	Work Nature	
KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION	ASSISTANT PROFESSOR	2021-10-08	1970-01-01	ACADEMICIAN	

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
2025010249_250510170002	BHD5ZN10KHAGIW	10-05-2025	600	SUCCESS

## **Proposed Topic of Research**

Analytics-Driven Big Data Framework for Predictive Healthcare: Early Detection and Risk Assessment of Chronic Diseases Using Electronic Health Records (EHRs).

## **Objective of the Proposed Research**

To develop a predictive analytics system using big data techniques to identify early risk factors and progression patterns of chronic diseases from large-scale healthcare datasets.

## **Background**

Healthcare systems are increasingly generating vast volumes of structured and unstructured data from EHRs, wearable devices, and clinical reports. Chronic diseases like diabetes and cardiovascular conditions contribute significantly to healthcare burdens. Traditional methods struggle to extract timely, actionable insights from this data. Big data analytics enables real-time processing and integration of heterogeneous data sources, uncovering hidden patterns and correlations. Predictive modeling can thus support early intervention and personalized care. Despite growing potential, challenges remain in data quality, integration, and interpretability, which this research aims to address through a robust, scalable big data analytics framework.

## **Methodology**

The research will implement a big data analytics pipeline using platforms like Apache Hadoop and Spark for data ingestion, cleaning, and transformation from EHRs and sensor data. Advanced machine learning models—random forests, gradient boosting, and neural networks—will be trained to identify risk factors and predict disease onset. Feature engineering will incorporate demographic, clinical, and lifestyle variables. Model interpretability will be enhanced using SHAP or LIME. The system will be evaluated on real-world datasets (e.g., MIMIC-IV, eICU), using metrics such as AUC-ROC, precision, and recall. Cloud-based deployment will ensure scalability and real-time analysis capability.

## **Expected Outcome**

The project will deliver a scalable, interpretable predictive analytics platform for chronic disease management, enabling earlier diagnosis, reducing hospitalizations, and supporting data-driven public health policies and personalized care strategies.



APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY  
(A State Government University)



*The University on the recommendation of  
the Board of Governors hereby confers*

*on*

**SREELEKHA T K**  
TECHNOLOGICAL  
UNIVERSITY  
*the Degree of*

**MASTER OF COMPUTER APPLICATIONS (MCA)**

*having fulfilled the requirements at the examination held in*

*May 2020*

*Given under the seal of the University, this day, the 28<sup>th</sup> of January 2021*

Register Number: LNCE17MCA030

Cumulative Grade Point Average (CGPA): 8.59

Name of Institution: NEHRU COLLEGE OF ENGINEERING AND RESEARCH  
CENTRE



*[Signature]*  
Vice-Chancellor



**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
(A State Government University)

**MASTER OF COMPUTER APPLICATIONS (MCA) DEGREE EXAMINATIONS**  
**CONSOLIDATED STATEMENT OF GRADES**

Sequence No. 17/4/00041

Date of Issue : 04/11/2020

Name : <b>SREELEKHA T K</b>	Register Number : <b>LNCE17MCA030</b>
Date of Birth : <b>28/08/1997</b>	Institution : <b>NEHRU COLLEGE OF ENGINEERING AND RESEARCH CENTRE</b>
Year of Admission : <b>2018</b>	Duration of the programme : <b>3 Years (6 Semesters)</b>
Date of Passing : <b>25-AUG-2020</b>	Medium of Instruction : <b>English</b>
Total Credits : <b>79.0</b>	CGPA : <b>8.59 ( Eight Point Five Nine )</b>

*The following Grades were awarded to the Candidate*

Sl. No.	Course Code	Course Name	Credits	Grade	Month & Year of Examination	Sl. No.	Course Code	Course Name	Credits	Grade	Month & Year of Examination
<b>Third Semester SGPA :- 8.27</b>											
1	RLMCA201	COMPUTER NETWORKS	4.0	B+	DEC-2018	12	RLMCA274	BUSINESS INTELLIGENCE AND ITS APPLICATIONS	4.0	B+	JUN-2019
2	RLMCA203	SOFTWARE ENGINEERING	4.0	A	DEC-2018	13	RLMCA232	SYSTEM DESIGN LAB	1.0	O	JUN-2019
3	RLMCA205	DATABASE MANAGEMENT SYSTEMS	4.0	B+	DEC-2018	14	RLMCA234	MOBILE APPLICATION DEVELOPMENT LAB	1.0	O	JUN-2019
4	RLMCA207	DESIGN AND ANALYSIS OF ALGORITHMS	4.0	B+	DEC-2018	<b>Fifth Semester SGPA :- 8.39</b>					
5	RLMCA209	WEB PROGRAMMING	4.0	B+	DEC-2018	15	RLMCA301	WEB DATA MINING	4.0	A	DEC-2019
6	RLMCA231	DATABASE LAB	1.0	O	DEC-2018	16	RLMCA303	E-COMMERCE	3.0	B	DEC-2019
7	RLMCA233	WEB PROGRAMMING LAB	1.0	O	DEC-2018	17	RLMCA305	CRYPTOGRAPHY AND CYBER SECURITY	4.0	A	DEC-2019
<b>Fourth Semester SGPA :- 8.36</b>						18	RLMCA371	SOCIAL NETWORK ANALYSIS	4.0	B+	DEC-2019
8	RLMCA202	APPLICATION DEVELOPMENT AND MAINTENANCE	4.0	B+	JUN-2019	19	RLMCA381	CLOUD COMPUTING	4.0	B+	DEC-2019
9	RLMCA204	BIG DATA TECHNOLOGIES	4.0	B+	JUN-2019	20	RLMCA341	SEMINAR	2.0	O	DEC-2019
10	RLMCA206	MOBILE COMPUTING	4.0	A+	JUN-2019	21	RLMCA351	MINI PROJECT	2.0	O	DEC-2019
11	RLMCA208	INTRODUCTION TO MACHINE LEARNING	4.0	B+	JUN-2019	<b>Sixth Semester SGPA :- 10.0</b>					
						22	RLMCA352	PROJECT AND VIVA VOCE	12.0	O	MAY-2020
***** END OF STATEMENT *****											

**CGPA - Cumulative Grade Point Average    SGPA - Semester Grade Point Average**



**Controller of Examinations**

Prepared by

Checked by



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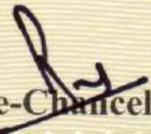
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3	RLMCA205	DATABASE MANAGEMENT SYSTEMS	4.0	B+	DEC-2018	14	RLMCA234	MOBILE APPLICATION DEVELOPMENT LAB	1.0	O	JUN-2019
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***** END OF STATEMENT *****											

**CGPA - Cumulative Grade Point Average    SGPA - Semester Grade Point Average**



**Controller of Examinations**

Prepared by

Checked by



**Nehru College of**

**Engineering and Research Centre**

**NAAC ACCREDITED**

Pampady, Thiruvilwamala - 680 588, Thrissur District., Kerala, India

(An ISO 9001 - 2008 Certified Institution)  
(Approved by AICTE New Delhi & Affiliated to KTU)

Our Motto  
Achieving Prosperity  
Through Creativity,  
Sustained Hard Work  
and Intellectual Integrity



## Course Certificate

This is to certify that ~~Ms~~ / ~~Mrs~~..... **SREELEKHA** T.K. ....

has successfully completed his/her Programme of studies for the **Master of Computer Applications (MCA)** Degree of the **MJTJ Abdul Kalam Technological University** at **Nehru College of Engineering and Research Centre,**

**Pampady, Thrissur. He/she** has appeared for the **Final Examination of May / June**

20.....20..... His / Her character and conduct are..... **good**.....

06/08/2026  
Date



  
Principal





# KALASALINGAM

Academy of Research and Education  
(DEEMED TO BE UNIVERSITY)

Estd.U/S 3 of UGC Act 1956. Accredited by NAAC with "A" Grade  
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Anand Nagar, Krishnankoil - 626 126.  
Srivilliputtur (via), Virudhunagar (Dt.)  
Tamil Nadu, INDIA.  
Ph : 04563 289012 / 42  
e-mail : info@kalasalingam.ac.in  
web : www.kalasalingam.ac.in

"Kalvivalal"  
Thiru. T. Kalasalingam  
Founder Chairman

"Ilayavallal"  
Dr. K. Sridharan  
Chancellor

Dr. R. Nagaraj  
Vice-Chancellor

Date: 08-02-2022

## CERTIFICATE

This is to certify that **Ms. T. K. SREELEKHA** is working in this University as **ASSISTANT PROFESSOR** in the Department of Computer Application from 14.09.2021.

As per record she is residing at the following address.

Ms. T.K. SREELEKHA,  
No.744, 7<sup>th</sup> Floor,  
Indira Gandhi Ladies Hostel (LH-3),  
Kalasalingam Academy of Research and Education,  
Anand Nagar, Krishnankoil -626126  
Srivilliputtur Taluk  
Virudhunagar District

This certificate is issued to enable her to apply for LPG Pass Port.



**REGISTRAR**

**Dr. V. VASUDEVAN**  
**REGISTRAR**

Kalasalingam Academy of Research and Education  
(Deemed to be University)  
Anand Nagar, Krishnankoil - 626 126

Trust Office : No. 52 (Old NO. 14), Sriman Srinivasan Road, Alwarpet, Chennai - 600 018, India

Phone: 044-24353370, Fax: 044-24331153

आयकर विभाग

INCOME TAX DEPARTMENT



भारत सरकार

GOVT. OF INDIA



स्थायी लेखा संख्या कार्ड  
Permanent Account Number Card

**KHFPS0111A**



नाम / Name

**SREELEKHA T K**

पिता का नाम / Father's Name

**UNNIKRISHNAN**

जन्म की तारीख / Date of Birth

**28/08/1997**

हस्ताक्षर / Signature



24062018


**ഇന്ത്യൻ തിരഞ്ഞെടുപ്പ് കമ്മീഷൻ**  
**ELECTION COMMISSION OF INDIA**  
 തിരഞ്ഞെടുപ്പ് കമ്മീഷൻ ഫോട്ടോ തിരിച്ചറിയൽ കാർഡ് - ELECTOR PHOTO IDENTITY CARD


**IWB0709170**



**പേര്** : ശ്രീലേഖ ടി കെ  
**NAME** : Sreelekha T K  
**അച്ഛന്റെ പേര്** : ഉണ്ണികൃഷ്ണൻ  
**FATHER'S NAME** : Unnikrishnan

**ലിംഗം / SEX** : സ്ത്രീ / Female  
**ജനനത്തീയതി / വയസ്സ്**  
**DATE OF BIRTH/AGE** : 28/08/1997 / 19  
**മതവിഭാഗം** : 9/151, തെക്കുംപറമ്പിൽ,  
**കവലപ്പാറ, ഷൊർണൂർ 679523**  
**ADDRESS** : 9/151, Thekkumparampil,  
 Kavalappara, Shornur 679523

ഇലക്ടറൽ രജിസ്ട്രേഷൻ ഔദ്യോഗിക സ്ഥലം  
**Date:** 06/01/2017 **ELECTORAL REGISTRATION OFFICER**  
**അസംബ്ലി നിയോജകസംഗമം** : 51, ഷൊർണൂർ നഗരം പേരം  
**ASSEMBLY CONSTITUENCY No. : 51, SHORNUR & NAME**  
**പാർട്ടി നമ്പർ** : 160  
**PART No.**

**NOTE / കുറിപ്പ്**  
 1. ഈ കാർഡ് കൈവശമുള്ളത് കോൺ ലാഭം നിലവിലുള്ള വോട്ടർ പട്ടികയിൽ ഒരു സാക്ഷാത്കാരം ആകണമെന്നല്ല. ഓരോ തിരഞ്ഞെടുപ്പിനും മുൻപായി നിലവിലുള്ള വോട്ടർ പട്ടികയിൽ നിങ്ങളുടെ പേര് ഉണ്ടാകാൻ പരിശോധിക്കേണ്ടതാണ്.  
 2. ഈ കാർഡിൽ സൂചിപ്പിച്ച ജനനത്തീയതി വോട്ടർ പട്ടികയിൽ തിരിച്ചറിയൽ ഉപയോഗിക്കുന്നതിനുള്ള അനുമതിയെടുക്കുന്നതിനുള്ള ഒരു തെളിവായി പരിഗണിക്കുന്നില്ല.

0001 051 160 0001 20160900416

FORM 26 C

(See Rule 3)



GOVERNMENT OF KERALA  
OTTAPALAM TALUK OFFICE

**NON-CREAMY LAYER CERTIFICATE**  
**( Central Employment/Educational Purpose )**



No. 91398061

FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES  
APPLYING FOR JOBS/EDUCATION UNDER THE GOVERNMENT OF INDIA

This is to certify that SREELEKHA T K Daughter of UNNIKRISHNAN T K of Village/Town Shoranur1 District/Division Palakkad in the State Kerala belongs to Veerasaiva community which is recognized as a backward class under the Government of India, Ministry of Social Justice and Empowerment's Resolution No 12011/68/98-BCC dated 27-10-1999 \*. Smt/Kumari SREELEKHA T K and / or her family ordinarily reside(s) in the Palakkad District/Division of the Kerala State. This is also to certify that she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel and Training O.M. No. 36012/22/93 – Estt. (SCT), dated 8-9-1993\*\*

Dated : 11/02/2025

Security Code : F7447

Designation of issuing officer : Tahsildar

\*\* As amended from time to time.

This certificate is valid for one year from the date of issuance

Digitally signed by ABDUL MAJEED C M

Date:11-02-2025 14:03:05

NOTE:

- 1.The term 'ordinarily' used here will have the same meaning as in Section 20 of the Representation of the Peoples Act, 1950
- 2.This certificate is issued on the basis of the details given in the application and further verifications. If any details given in the application and attached/ submitted documents are found to be incorrect at a later date, the competent authority has all the right to cancel the certificate without prior intimation".
- 3.This digitally signed document is legally valid as per the Information Technology (IT)Act,2000
- 4.Authenticity of this document can be verified from <http://edistrict.kerala.gov.in/> and submitting the Certificate Number and Security code. Alternatively, please call the numbers 155300 (from BSNL landline), 0471155300 (from BSNL mobile), 04712335523 / 04712115094 / 04712115098 (from other networks) and quote the Certificate Number to the operator.



GOVERNMENT OF KERALA  
SHORNUR 1 VILLAGE OFFICE

CASTE CERTIFICATE

No. 31634914

Date: 21/04/2018

Certified that the person with the details mentioned below belongs to the caste mentioned below.

Name of Person to whom certificate is issued	SREELEKHA T K
Gender	Female
Age	20
Name of Father	UNNIKRISHNAN T K
Address	THEKKUMPARAMBIL, 456B, KAVALAPPARA
Religion	Hindu
Caste	OBC/ VEERASAIVAS
Post Office with Pin code	KAVALAPPARA, 679523
Name of Local body	Shoranur
Village	Shoranur1
Taluk	Ottappalam
District	Palakkad
Date of Issue of Certificate	21/04/2018
Designation of the issuing officer	VILLAGE OFFICER

This certificate is issued based on the details given in the application, local enquiry, facts and records produced and is valid only for a period of three years from the date of issue.

Security Code : LEG93

Signature valid

Digitally signed by JANE STEPHEN  
Date: 2018.04.21 10:51:28 IST

NOTE:

- 1 This digitally signed document is legally valid as per the Information Technology (IT) Act, 2000.
- 2 Authenticity of this document can be verified from <http://edistrict.kerala.gov.in/> and submitting the Certificate Number and Security code. Alternatively, please call the numbers 155300(from BSNL landline), 0471155300(from BSNL mobile), 04712335523/04712115094/04712115098(from other networks) and quote the Certificate Number to the operator

## **Proposed Topic of Research**

Analytics-Driven Big Data Framework for Predictive Healthcare: Early Detection and Risk Assessment of Chronic Diseases Using Electronic Health Records (EHRs).

## **Objective of the Proposed Research**

To develop a predictive analytics system using big data techniques to identify early risk factors and progression patterns of chronic diseases from large-scale healthcare datasets.

## **Background**

Healthcare systems are increasingly generating vast volumes of structured and unstructured data from EHRs, wearable devices, and clinical reports. Chronic diseases like diabetes and cardiovascular conditions contribute significantly to healthcare burdens. Traditional methods struggle to extract timely, actionable insights from this data. Big data analytics enables real-time processing and integration of heterogeneous data sources, uncovering hidden patterns and correlations. Predictive modeling can thus support early intervention and personalized care. Despite growing potential, challenges remain in data quality, integration, and interpretability, which this research aims to address through a robust, scalable big data analytics framework.

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## **Expected Outcome**

The project will deliver a scalable, interpretable predictive analytics platform for chronic disease management, enabling earlier diagnosis, reducing hospitalizations, and supporting data-driven public health policies and personalized care strategies.