



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

**APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES**

Date of Application:06-07-2021

Department	COMPUTER SCIENCE AND ENGINEERING	Application No.	202110150
Area of Research	MACHINE LEARNING	Research Mode	FULL TIME

**Name** :RAJA SEKAR R  
**Date of Birth / Age** :05-05-1989 / 32 Years  
**Gender** :MALE  
**Category** :MBC  
**e-Mail ID** :rsblacktulip@gmail.com  
**Mobile** :8344204371



*Signature*

<b>Father's/Husband's Name</b>	RAJAGOPAL N	<b>Father's/Husband's Occupation</b>	FARMER
<b>Family Income</b>	SAGUNTAHL	<b>Residential Type</b>	RURAL
<b>Birth Place</b>	ALANGULAM	<b>Mother Tongue</b>	TAMIL
<b>Religion</b>	HINDU	<b>Martial Status</b>	MARRIED
<b>Aadhaar No.</b>	965018330799	<b>PAN No.</b>	BIQPR1395N
<b>Physically Challenged</b>	NO	<b>Type of Disability</b>	-
<b>Address for Communication:</b> 5/1/3 TRANSPORT NAGAR ATHIYUTHU, ALANGULAM TALUK TENKASI DISTRICT TAMILNADU INDIA Pin-627851		<b>Permenant Address:</b> 3/8 PERUMAL KOVIL STREET ALAGIAPANDIAPURAM TIRUNELVELI DISTRICT TAMILNADU INDIA Pin-627202	

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
B.E	CSE	ANNA UNIVERSITY	2010	86	FIRST	REGULAR
M.E	CSE	ANNA UNIVERSITY	2013	9.22	FWD	REGULAR

Experience				
Organization	Designation	Experience From	Experience TO	Work Nature
JP COLLEGE OF ENGINEERING	LECTURER	2010-06-03	2011-06-14	TEACHING
SARDAR RAJA COLLEGE OF ENGINEERING	ASSISTANT PROFESSOR	2013-07-07	2017-05-31	TEACHING
THAMIRABHARANI ENGINEERING COLLEGE	ASSISTANT PROFESSOR	2017-07-03	2019-10-20	TEACHING
VELTECH RANGARAJAN DR.SAGUNTHALA R & D INSTITUTE OF SCIENCE AND TEHNOLOGY.	ASSISTANT PROFESSOR	2019-11-15	2021-07-05	TEACHING

Payment Details
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Transaction ID	Reference	Date of transaction	Amount	Status
202110150_210710093422	VHD40103232346	10-07-2021	600	SUCCESS

## **RESEARCH PROPOSAL**

### **PHYSIOLOGICAL TRAITS OF BIOMETRIC RECOGNITION WITH MACHINE LEARNING AND DEEP LEARNING APPROACHES**

**R.Raja Sekar, M.E. (CSE)**

#### **ABSTRACT:**

Biometrics is the art and expertise of automatic recognition accomplished through Computers, which gain and investigate physiological and behavioral uniqueness of human being. The principle behind biometrics research is to provide computer sophisticated intellect to robotically identify and recognize individuals through their digital biometric signs. Thus, biometrics study is essential in terms of public and private security of every individual. In this research proposal am going to experiment recognition accuracy of various physiological biometric traits like Fingerprint, Face and Iris with several machine learning techniques and deep learning techniques such as LSTM (Long Short Term Memory) and CNN (Convolutional Neural Network). To overcome the challenges faced in traditional techniques this proposal can act as art of work in reducing the time of analysis and thereby increasing the accuracy rate of recognition

**Keywords:** Biometric, Fingerprint, Face Recognition, Iris Recognition, Machine Learning, Deep Learning.



Reg. No.96806104031/RG

*The Syndicate of the Anna University hereby makes known that*  
**RAJA SEKAR R** *has been admitted to the* **DEGREE OF BACHELOR**  
**OF ENGINEERING** *in* **COMPUTER SCIENCE AND**  
**ENGINEERING** *under the Faculty of Information and Communication*  
*Engineering, having completed the prescribed programme of study and having been*  
*certified by the duly appointed examiners to be qualified to receive the same, and has*  
*been placed in* **FIRST CLASS** *at the Examination held in* **APRIL 2010.**

*Given under the Seal of the University*



Chennai 600 025  
India

December 2010 *Controller of Examinations*

*Registrar*

*Vice-Chancellor*

SI.No. AU 176036

Read by	<i>B. Y. M. M. M.</i>
Checked by	<i>M. J. M.</i>

# Anna University



Reg.No. 952711405011/RG

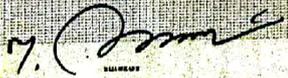
The Syndicate of the Anna University hereby makes known that **RAJA SEKAR R** has been admitted to the **DEGREE OF MASTER OF ENGINEERING** in **COMPUTER SCIENCE AND ENGINEERING** under the *Faculty of Information and Communication Engineering*, having completed the prescribed programme of study and having been certified by the duly appointed examiners to be qualified to receive the same, and has been placed in **FIRST CLASS WITH DISTINCTION** at the Examination held in **JUNE 2013**.

Given under the Seal of the University

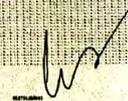


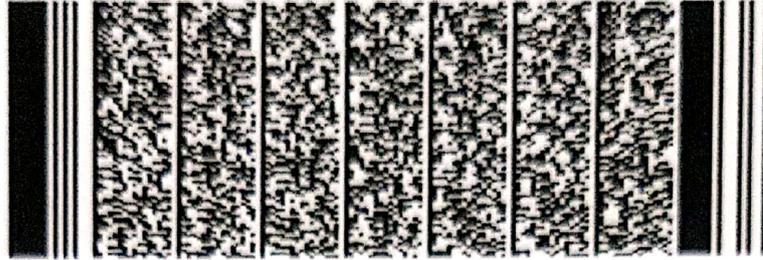
Chennai 600 025  
India

November 2013  
JPMCHEN/1405011/RG

  
Controller of Examinations

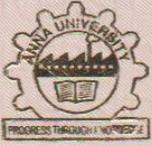
  
Registrar

  
Vice-Chancellor



Sl. No. 193984

Read by	P. S. L.
Verified by	M. R. K.



**ANNA UNIVERSITY, CHENNAI - 25**  
**M.E. DEGREE EXAMINATIONS**  
**CONSOLIDATED STATEMENT OF GRADES**



R099015759932R

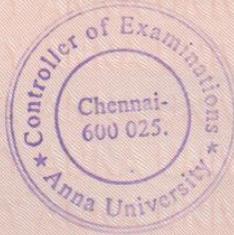
Folio No. AUCD331174

NAME OF THE CANDIDATE	RAJA SEKAR R	REGISTER NO.	952711405011
DATE OF BIRTH	05-MAY-89	GENDER	MALE
MONTH & YEAR OF LAST APPEARANCE	JUN 2013		
COLLEGE OF STUDY	SARDAR RAJA COLLEGE OF ENGINEERING	REGULATIONS	2009
PROGRAMME & SPECIALIZATION	M.E. Computer Science and Engineering		

SEM. NO.	COURSE CODE	COURSE TITLE	CREDITS	LETTER GRADE	GRADE POINT	MONTH & YEAR OF PASSING
01	CS9211	Computer Architecture	3	A	9	JAN 2012
01	CS9212	Data Structures and Algorithms	3	B	8	JAN 2012
01	CS9213	Computer Networks and Management	3	A	9	JAN 2012
01	MA9219	Operations Research	4	C	7	JAN 2012
01	SE9213	Object Oriented Software Engineering	3	B	8	JAN 2012
01	CS9215	Data Structures Laboratory	2	S	10	JAN 2012
01	CS9216	Networking Laboratory	2	S	10	JAN 2012
02	CS9221	Data Base Technology	3	A	9	JUN 2012
02	CS9222	Advanced Operating Systems	3	B	8	JUN 2012
02	CS9223	Advanced System Software	3	A	9	JUN 2012
02	CS9224	Information Security	3	S	10	JUN 2012
02	CS9225	Web Technology	3	B	8	JUN 2012
02	CS9269	Software Project Management	3	A	9	JUN 2012
02	CS9227	Operating System Lab	2	S	10	JUN 2012
02	CS9228	Web Technology Lab	2	S	10	JUN 2012
03	CS9252	Grid Computing	3	S	10	NOV 2012
03	CS9259	Network Security	3	A	9	NOV 2012
03	CS9264	Data Warehousing and Data Mining	3	S	10	NOV 2012
03	CS9234	Project Work (Phase I)	6	S	10	NOV 2012
04	CS9241	Project Work (Phase II)	12	S	10	JUN 2013

\*\*\* End of Statement \*\*\*  
**Cumulative Grade Point Average : 9.22**  
**Classification : FIRST CLASS WITH DISTINCTION**

PROGRESS THROUGH KNOWLEDGE



Medium of Instruction : ENGLISH

Chennai - 25.  
 Date 19/08/2013

*[Signature]*  
 SIGNATURE OF THE STUDENT



*[Signature]*  
 CONTROLLER OF EXAMINATIONS

## GRADE CLASSIFICATION

Range of Marks	91 - 100	81 - 90	71 - 80	61 - 70	57 - 60	50 - 56	< 50
Letter Grade	S	A	B	C	D	E	U
Grade Point	10	9	8	7	6	5	0

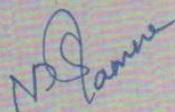
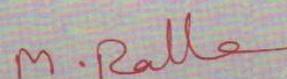
### FORMULA FOR GPA & CGPA

$$\text{GPA} = \frac{\sum_{i=1}^n C_i GP_i}{\sum_{i=1}^n C_i}$$

$$\text{CGPA} = \frac{\sum_{i=1}^n C_i GP_i}{\sum_{i=1}^n C_i}$$

Where  $C_i$  - is the Credits assigned to the course  
 $GP_i$  - is the point corresponding to the grade obtained for each Course  
 $n$  - is number of all Courses successfully cleared during the particular semester in the case of GPA and during all the semesters in the case of CGPA

Sl. No.: PCSGB 049082

Read by	
Verified by	



SARDAR RAJA COLLEGES

# SARDAR RAJA COLLEGE OF ENGINEERING

(Approved by Aicte F.No. 732-52-136 /RDEG / 2000 dt: 14-7-2000 & Affiliated to Anna University)

RAJA NAGAR, ALANGULAM-627 808, TIRUNELVELI - Dist.,

Ph: 04633 - 272798, 8220077052

www.src.org.in

srce@src.org.in

Sl.No.: 002648

Admission No.: 2890

## TRANSFER CERTIFICATE

1. Name of the Student : RAJA SEKAR. R ✓
2. Name of Father of the Student : RAJA GOPAL. N ✓
3. Nationality, Religion and Caste : INDIAN, HINDU, MARAVAR ✓
4. Community : DNC ✓
5. Sex : MALE ✓
6. Date of Birth as entered in the Admission Register in words : 05.05.1989(FIVE MAY NINETEEN EIGHTY NINE)
7. Date of Admission : 27.08.2011
8. Class in which the student was studying at the time of leaving : SECOND YEAR IV-TH SEM ME COMPUTER SCIENCE AND ENGINEERING ✓
9. Medium of Study : ENGLISH ✓
10. Whether qualified for promotion to higher class : REFER THE MARKSHEET ✓
11. Whether the student has paid all the fees due to Institution : YES ✓
12. Date on which the student actually left the Institution : 03.05.2013 ✓
13. Reason for Leaving : COURSE COMPLETED ✓
14. Date on which application for Transfer Certificate was made on behalf of the Student : 14 NOV 2015 ✓
15. Date of issue of Transfer Certificate : 16 NOV 2015 ✓
16. Conduct and Character : Good. ✓

Date: 16 NOV 2015



*[Signature]*  
PRINCIPAL  
SARDAR RAJA COLLEGE OF ENGINEERING  
RAJA NAGAR, ALANGULAM 627 808  
TIRUNELVELI DISTRICT



# J.P. COLLEGE OF ENGINEERING

College Road, Ayikudy, Tenkasi - 627 852. Tirunelveli District, Tamilnadu, India.

An ISO 9001 : 2008 Certified Institution, A Christian Minority Institution

Established by Grace Swaminathan Educational and Charitable Trust

Approved by AICTE, New Delhi - No. : 06/05-TN/E&T/2008/56 Dated 04.06.08

Affiliated to Anna University of Technology, Tirunelveli - No : 104/Affiliation/2008 Dated 03.07.08

Phone : 04633 - 268 320, 292 140, 267 355 Mobile : 80125 20430, Fax : 04633 - 268 320

E-Mail : info@jpcollege.org

Web : www.jpcollege.org

Code. : 4994

Dr. D. Gnanadurai B.E.,M.S.,Ph.D.,  
PRINCIPAL

Date : .....  
14.06.2011

## EXPERIENCE CERTIFICATE & RELIEVING ORDER

This is to Certify that Mr. R. Rajasekar has served as Lecturer in Computer Science and Engineering department in this institution from 01.07.2010 to 14.06.2011. He was relieved on 14.06.2011 at his own request.

During the period of his service his conduct and character were good.

  
PRINCIPAL





**JESUS**  
GROUP OF ORGANIZATIONS

**SARDAR RAJA COLLEGE OF ENGINEERING**



(Approved by AICTE F.NO. 732-52-136/RDEG/2000 dt: 14.07.2000 & Affiliated to Anna University)

Ref. No:

Date: 05.06.2017

### Experience Certificate

This is to certify that Mr. R. RAJA SEKAR has worked in this institution as Assistant Professor in Computer Science and Engineering Department from 04.06.2013 to 30.05.2017. During his tenure, he was sincere in his duties.

His conduct and character were Good.

I wish him All Success.



*[Signature]*  
**PRINCIPAL**  
**PRINCIPAL**  
SARDAR RAJA COLLEGE OF ENGINEERING  
RAJA NAGAR, ALANGULAM - 627 808,  
TIRUNELVELI DISTRICT.

*Love and Serve mankind through Education*

Raja Nagar | Tenkasi - Tirunelveli Highways | Alangulam | Tirunelveli - 627 808 | Tel: +91 4633 - 272798 | Fax: +91 4633 - 272796 | [src@src.org.in](mailto:src@src.org.in)

[www.src.org.in](http://www.src.org.in)



# THAMIRABHARANI ENGINEERING COLLEGE

(Approved by AICTE - New Delhi. Affiliated to Anna University - Chennai)

Chathirampudukulam, Chidambaranagar - Vepemkulam Road, Thatchanallur, Tirunelveli - 627 358.  
Phone : 0462 2301266, 3244669. Fax : 0462 - 2301366. Email : tec\_edu\_in@yahoo.com, Web : www.tec-edu.in

---

Date: 01.11.2019

## RELIEVING ORDER CUM SERVICE CERTIFICATE

This is to certify that **Mr. R.RAJA SEKAR** worked as an Assistant Professor in the department of Computer Science and Engineering in Thamirabharani Engineering College from 03-07-2017 to 23-10-2019. He is relieved from his duties and responsibilities on 23-10-2019 on his own request.

During this period, his conduct and character were *good*.

**PRINCIPAL**

THAMIRABHARANI ENGINEERING COLLEGE

Chathirampudukulam Village,  
Chidambaranagar - Vepemkulam Road,  
Thatchanallur, Tirunelveli - 627 358.

आयकर विभाग  
INCOME TAX DEPARTMENT

भारत सरकार  
GOVT. OF INDIA

RAJA SEKAR

RAJAGOPAL

05/05/1989  
Permanent Account Number  
BIQPR1395N

  
Signature



20072012



इस कार्ड के खोने / पाने पर कृपया सूचित करें / लौटारें :  
आयकर पैन सेवा इकाई, एन एस डी एल  
तीसरी मंजिल, सफायर चेंबरस,  
बानेर टेलिफोन एक्चेंज के नजदीक,  
बानेर, पुना - 411 045.

*If this card is lost / someone's lost card is found,  
please inform / return to :*  
Income Tax PAN Services Unit, NSDL  
3rd Floor, Sapphire Chambers,  
Near Baner Telephone Exchange,  
Baner, Pune - 411 045.

Tel: 91-20-2721 8080, Fax: 91-20-2721 8081  
e-mail: tininfo@nsdl.co.in





# India Driving Licence (Tamil Nadu)

Form 7

DOI 30/06/2016

D.L.No TN76 20160005355  
Name RAJA SEKAR R  
S.D.W of RAJA GOPAL  
Address  
3/8/3-9 PERUMAL KOVIL STREET  
ALAGIYAPANDIYA PURAM  
TIRUNELVELI TK 627202  
Temp Add  
SANKAR MOTOR DRIVING SCHOOL  
D.O.B 05/05/1989 B.G



Punishments

Licensed to drive throughout India, vehicles of the following descriptions  
M/CYCL WG 30/06/2016 TN76 LMY 30/06/2016 TN76

Non-Transport Veh. Valid upto 29/06/2036



*[Handwritten Signature]*  
Signature of T I  
of the Holder

*[Handwritten Signature]*  
Asst Licensing Officer  
RTO - TENKASI  
*[Handwritten Initials]*

C.No: 301 / 03

GCP(ET3)-26-6--1, 67,200 Cps.-10-5-99

R.Dis...../9 dt.

**DNC**



மாவட்டக் குறியீடு எண் :  
District Code

18

வட்டக் குறியீடு எண் :  
Taluk Code

01

கிராமக் குறியீடு எண் :  
Village Code

006

சான்றிதழ் எண் :  
Certificate No.

**583359**

சாதிச் சான்றிதழ்

**COMMUNITY CERTIFICATE**

மாலை மாவட்டம் வட்டம்  
 சிதம்பரம் மன்றம்  
 செல்வன் ராஜகேசரி தகப்பனர்/கணவர்  
 பெயர் ராஜகேசரி இராஜகேசரி  
 வகுப்பைச் சார்ந்தவா அரசு ஆணை நிலை எண் 28 பிற்பட்ட மற்றும் மிகவும்  
 பிற்பட்ட பிரிவின் நலத்துறை நாள் 19-7-1994 வரிசை எண் 200 பட்டி சர்  
 மாபினர் பிரிவினைச் சார்ந்தவர் எனச் சான்றளிக்கப்படுகிறது.

This is to certify that ..... Son/Daughter  
of Thiru ..... of .....

Village / Town ..... Taluk .....

District of the State of Tamil Nadu belongs to  
Community, which is recognised as  
a Denotified Community as per Government Order (Manuscript Series) No. 28,  
Backward Classes and Most Backward Classes Welfare, dated 19th July 1994  
vide Serial No. ....

இரு / திருமதி / செல்வன் / செவி ராஜகேசரி  
 என்பவரும் அவருடைய குடும்பத்தினரும் தமிழ்நாடு  
 மாவட்டத்தில் ..... வட்டத்தில் சிதம்பரம் மன்றம்  
 கிராமத்தில் / நகரத்தில் வசித்து வருகிறார்கள் எனச் சான்றளிக்கப்படுகிறது.

2. It is certified that Thiru/Tmt./Selvan/Selvi..... and  
his/her family ordinarily reside(s) at ..... Village/Town  
..... Taluk ..... District of Tamil Nadu.

முத்திரை  
Seal



கையொப்பம் :  
Signature  
 நாள் :  
Date  
 தனி / திருமதி / செல்வன் / செவி :  
in Capital Letters  
 பதவி :  
Designation

*(Handwritten Signature)*  
 திருநெல்வேலி.

26-89

**ANNEXURE-I**

**CERTIFICATE FROM THE ORGANISATION WHERE THE CANDIDATE IS  
EMPLOYED**

Certified that Mr./Ms./Mrs. \_\_\_\_\_ is employed as  
(Designation) \_\_\_\_\_ in the (Department/Division Name)  
\_\_\_\_\_ of (Institution/Industry Name)  
\_\_\_\_\_

We have no objection in forwarding his/her application for the Ph. D Research Programme

**FOR FULL TIME:**

The candidate will be sanctioned leave for the duration of the research programme and will be relieved from duty from \_\_\_\_\_ to \_\_\_\_\_ to undertake the full time research work in the University.

**FOR PART TIME:**

The candidate will be permitted to undertake part time study in the University/College and will be allowed to be present for discussions with the supervisor, attending course works, conduct of experiments and participations in seminars and related presentations. Further the required facilities at our organization will also be provided to the candidate for doing research.

Date :

Signature of the Head of organization with office  
seal

**Note:**

**Not Applicable for me as of now.**