



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

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:22-12-2020

Department	COMPUTER APPLICATIONS	Application No.	202020171
Area of Research	DATA SCIENCE	Research Mode	PART TIME

Name :SAKTHIPRIYA D

Date of Birth / Age :29-03-1988 / 32 Years

Gender :FEMALE

Category :BC

e-Mail ID :sakthimca2011@gmail.com

Mobile :9786837803



D. Sakthi

Father's/Husband's Name	SUNDARAPANDIAN N	Father's/Husband's Occupation	SALES REPRESENTATIVE
Family Income	200000	Residential Type	URBAN
Birth Place	MADURAI	Mother Tongue	TAMIL
Religion	HINDU	Martial Status	MARRIED
Aadhaar No.	542875498739	PAN No.	HNEPS2516D
Physically Challenged	NO	Type of Disability	-
Address for Communication: 12 12,KANNI MARRIAMMAN KOVIL 3RD STREET K.PUDUR MADURAI MADURAI DISTRICT TAMIL NADU INDIA Pin-625007		Permenant Address: 12 12,KANNI MARRIAMMAN KOVIL 3RD STREET K.PUDUR MADURAI MADURAI DISTRICT TAMIL NADU INDIA Pin-625007	

Qualification						
Degree	Discipline	College/university	Year Passed	AVG/CGPA	Class	Mode
B.SC	CS	MADURAI KAMARAJ UNIVERSITY	2008	68	FIRST	REGULAR
MCA	COMPUTER APPLICATION	ANNA UNIVERSITY	2011	76	FIRST	REGULAR
M.PHIL	CS	MADURAI KAMARAJ UNIVERSITY	2016	78	FIRST	REGULAR

Experience					
Organization	Designation	Experience From	Experience TO	Work Nature	
ULTRA ENGINEERING COLLEGE	PROGRAMMER	2012-05-21	2011-09-30	PROGRAMMING	
LADY DOAK COLLEGE	ASSISTANT PROFESSOR	2012-12-03	2013-10-31	TEACHING	
LATHAMATHAVAN ENGINEERING COLLEGE	PROGRAMMAR	2013-01-25	2013-12-22	PROGRAMMING	
MANGAYARKARASI COLLEGE OF ARTS AND SCIENCE FOR WOMEN	ASSISTANT PROFESSOR	2016-07-25	2020-12-22	TEACHING	

Payment Details				
Transaction ID	Reference	Date of transaction	Amount	Status
202020171_201223071121	VUR29585802818	23-12-2020	600	SUCCESS

RESEARCH PROPOSAL

1. Proposed Title:

“Big Data based Optimization and Simulation using Machine Learning to improve crop yield in Madurai District”

2. Staff Details

Mrs.D.Sakthipriya MCA.,M.Phil.,
Department of Computer Science
Mangayarkarasi College of arts & science for Women
Madurai.

3. Problem definition

Improving crop yield is a critical and necessary component of achieving food security and protecting natural resources and environmental quality for future generations. Although significant progress has been made in agricultural science developing seed varieties with genetic traits desirable in different planting environments and in advancing farming technologies and practices, tremendous opportunities exist in exploring how individual farmers, with the limited available resource, can make the best use of what agricultural science offers.

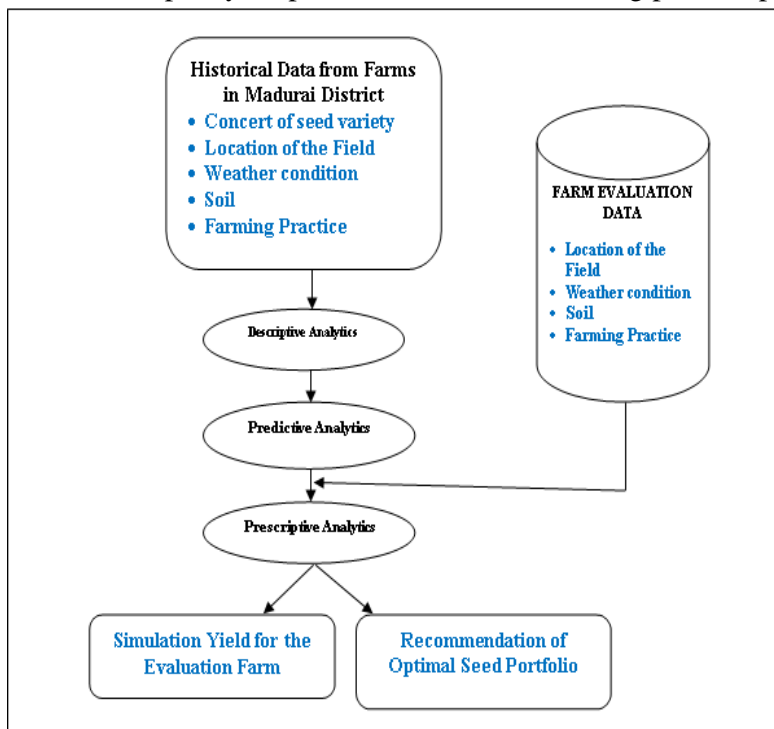
As a small part of the research effort in that direction, it proposes “**an analytics framework for seed variety selection decisions**” – one of the most important decisions a farmer has to make that has significant implications for the yield of the farm. Agribusinesses offer many seed varieties to farmers based on the yield performance of the seed varieties observed over several years at various farm locations at Madurai district. Farmers face the decision of selecting a small set of seed varieties offered and allocating farmland to the selected seed varieties. An informed decision requires **accurate predictions of yield performances of seed varieties on the targeted farmland** and balancing tradeoffs between expected yield and risk associated with the varieties selected.

4. Focus Objectives

- i) To develop a methodological framework to help farmers in Madurai District make paddy seed selection decisions for betterment of the Crop Yield.
- ii) To apply machine-learning models as the predictive models for the paddy yield with the data set from Syngenta and comparing with the local data set available at agricultural departments to the farmers in Madurai District.
- iii) To collect the dataset of Paddy yield and other related data in Madurai district from 2010 and 2019.
- iv) Evaluation of machine-learning models to update simulation and optimization of paddy yield under different weather conditions.
- v) Formulation of a simulation-based optimization problem to determine the optimal paddy-mix to minimize the risk associated with the yield.

5) Methodology

The methodology framework developed in this research can be applied to seed selection decisions of paddy crops and influence the farming practice positively.



6) National and international Status

Literature source	Contributions
Xu, J., Cai, H., Wang, X., Ma, C., Lu, Y., Ding, Y., & Saddique, Q. (2020). Exploring optimal irrigation and nitrogen fertilization in a winter wheat- summer maize rotation system for improving crop yield and reducing water and nitrogen leaching. <i>Agricultural Water Management</i> , 228, 105904.	The author found optimal irrigation could be adjusted in variable precipitation years in Guanzhong Plain. Maize seedling and wheat jointing stages were the sensitive phases to water deficit.
Shirley, R., Pope, E., Bartlett, M., Oliver, S., Quadrianto, N., Hurley, P., & acon, J. (2020). An empirical, Bayesian approach to modelling crop yield: Maize in USA. <i>Environmental Research Communications</i> .	The author applied an empirical, data-driven approach for describing crop yield as a function of monthly temperature and precipitation by employing generative probabilistic models with parameters determined through Bayesian inference.
Cui, J., Shao, G., Lu, J., Keabetswe, L., & Hoogenboom, G. (2020). Yield, quality and drought sensitivity of tomato to water deficit during different growth stages. <i>Scientia Agricola</i> , 77(2).	The author investigated the drought sensitivity of tomato (<i>Lycopersicon esculentum</i> Mill.) yield and quality during different growth stages, field and pot experiments were conducted in a high tunnel in southern China.
Mendez, J. M., & Dasig, D. D. (2020). Frost Prediction in Highland crops Management Using IoT-Enabled System and Multiple Regression. In <i>Internet of Things and Analytics for Agriculture</i> , Volume 2 (pp. 261-288). Springer, Singapore.	This article discusses the concepts of Precision Agriculture and applications of the Internet of things (IoT) in agriculture, the design and challenges of an IoT-enabled system for highland crops management, and utilized multiple regression as a frost prediction technique

Dong, Y., Fu, Z., Peng, Y., Zheng, Y., Yan, H., & Li, X. (2020). Precision fertilization method of field crops based on the Wavelet-BP neural network in China. Journal of Cleaner Production, 246, 118735.	The author proposes a method for the precision fertilization of maize based on the wavelet-BP neural network which increases maize production, while reducing production cost and agricultural pollution.
Meng, X., Liu, M., & Wu, Q. (2020). Prediction of Rice Yield via Stacked LSTM. International Journal of Agricultural and Environmental Information Systems (IJAEIS), 11(1), 86-95.	This article proposes Long Short- Term Memory recurrent neural network (LSTM) methods of time series prediction of Rice Yield.
Maldaner, L. F., & Molin, J. P. (2020). Data processing within rows for sugarcane yield mapping. Scientia Agricola, 77(5).	The author tested a method for sugarcane yield data cleaning, investigating if the data recording frequency influences the characterization of yield variations in mapping high-resolution spatial data within a single row.

7)Novelty in Research Proposal:

- **This research suggests a way to better ground their recommendations for seed selection decision on variety of paddy by the farmers by using the application to be built.**
- **The big data analytics framework proposed in this research, which integrates methodologies from machine learning, optimization, and simulation has great potential to improve the quality of seed selection decision, and ultimately improve farmers' crop yield.**
- **Further agricultural department community actively embraces machine-learning and data-driven decision-making methodologies to solve important problems in the agriculture domain.**
- **The method proposed for assessing the environmental impact of agriculture on the scale of a farming region cover a wide range of objectives, users and concepts.**
- **The following six main types of method used for analysis: environmental risk mapping, life cycle analysis, environmental impact assessment, multi-agent system, linear programming and agro-environmental indicators**

8) References:

- Deep transfer learning for crop yield prediction with remote sensing data ,AX Wang, C Tran, N Desai, D Lobell - Proceedings of the 1st 2018 - dl.acm.org
- Machine learning approaches for crop yield prediction and nitrogen status estimation in precision agriculture: A review,A Chlingaryan, S Sukkarieh, B Whelan - Computers and electronics in 2018.
- Deep gaussian process for crop yield prediction based on remote sensing data. J You, X Li, M Low, D Lobell... - Thirty-First AAAI ..., 2017
- Performance Evaluation of Machine Learning Techniques for Mustard Crop Yield Prediction from Soil Analysis,V Pandith, H Kour, S Singh, JManhas... - Journal of Scientific ..., 2020.
- An improved machine learning algorithm for predictingblast disease in paddy crop Sreevallabhadev Radhakrishnan July 2020.
- Deep learning approach for recognition and classification of yield affecting paddy crop stresses using field imagesArtificial Intelligence in Agriculture2020.Basavaraj S. Anami Naveen N. Malvade Surendra Palaiah
- Machine-Learning-Based Simulation for Estimating Parameters in Portfolio Optimization: Empirical Application to Soybean Variety Selection Durai Sundaramoorthi, Lingxiu Dong Olin Business School, Washington University in St. Louis.

9) Additional Information:

The research proposed is to be carried out in Madurai District

- The main aim of the project proposal is to improve the economic status of the farmer by doubling the production and tripling the income.
- For Second Green Revolution Agriculture Department has formulated various policies and strategies to achieve equitable, competitive and sustainable growth in Agriculture Crops. Madurai District is mainly agrarian with an average rainfall of 874.5 mm. Paddy, Millet, Pulses, Cotton are the major crops cultivated in Madurai District. Periyar – Vaigai canal is the main source of irrigation.
- The average yield of paddy is high in Madurai regions where the seed replacement rate is high.
- The Data collected for research is as follows:

1. Farming Population (as per 2011 census) Small Farmers – 58,716 Marginal Farmers – 2, 05,771 Agricultural Laborers- 4, 01, 867 2. No. of Block Assistant Director of Agriculture- 13 3. No. of Agricultural Extension Centre to later farmers needs of Agriculture inputs and technical advices Main AEC – 13, Sub AEC – 18 4. Seed Processing Unit – 2 State Seed Farm – 1 5. Soil Testing Laboratory – 2 Fertilizer Testing Laboratory – 1 Pesticide Testing Laboratory – 1	Liquid Bio Fertilizer Production unit – 1 Bio Control Laboratory – 1 IPM Control Laboratory – 1 Sugarcane Parasite Breeding Station – 1 6. Agricultural College & Research Institute – 1 7. Krishi Vigyan Kendra – 1 8. Total No. of Fertilizer Shops – 413 9. Total No. of PACCS – 182 10. Cropping Intensity – 1.16 11. Irrigation Intensity – 1.18
--	--

RESEARCH PROPOSAL

1. Proposed Title:

“Big Data based Optimization and Simulation using Machine Learning to improve crop yield in Madurai District”

2. Staff Details

Mrs.D.Sakthipriya MCA.,M.Phil.,
Department of Computer Science
Mangayarkarasi College of arts & science for Women
Madurai.

3. Problem definition

Improving crop yield is a critical and necessary component of achieving food security and protecting natural resources and environmental quality for future generations. Although significant progress has been made in agricultural science developing seed varieties with genetic traits desirable in different planting environments and in advancing farming technologies and practices, tremendous opportunities exist in exploring how individual farmers, with the limited available resource, can make the best use of what agricultural science offers.

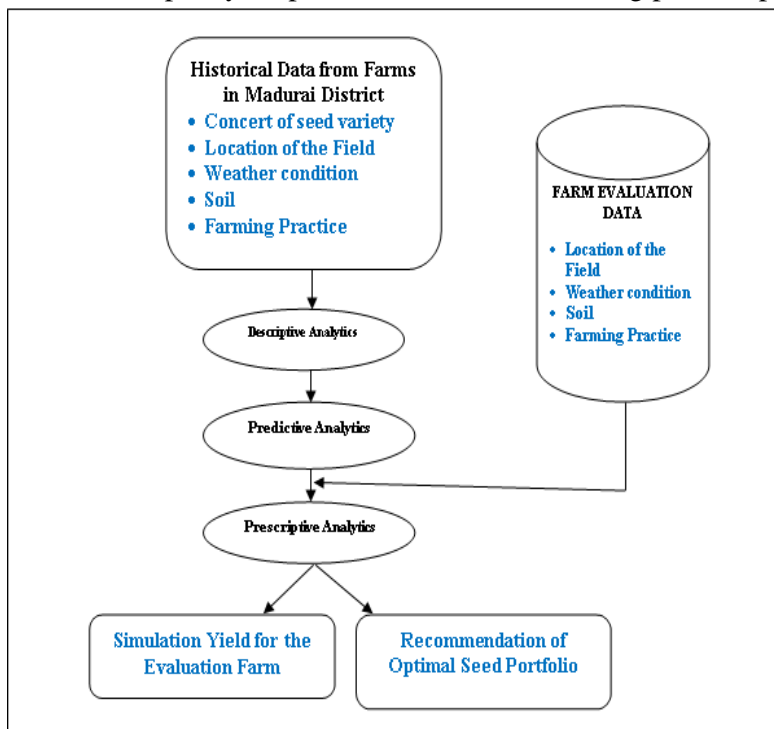
As a small part of the research effort in that direction, it proposes “**an analytics framework for seed variety selection decisions**” – one of the most important decisions a farmer has to make that has significant implications for the yield of the farm. Agribusinesses offer many seed varieties to farmers based on the yield performance of the seed varieties observed over several years at various farm locations at Madurai district. Farmers face the decision of selecting a small set of seed varieties offered and allocating farmland to the selected seed varieties. An informed decision requires **accurate predictions of yield performances of seed varieties on the targeted farmland** and balancing tradeoffs between expected yield and risk associated with the varieties selected.

4. Focus Objectives

- i) To develop a methodological framework to help farmers in Madurai District make paddy seed selection decisions for betterment of the Crop Yield.
- ii) To apply machine-learning models as the predictive models for the paddy yield with the data set from Syngenta and comparing with the local data set available at agricultural departments to the farmers in Madurai District.
- iii) To collect the dataset of Paddy yield and other related data in Madurai district from 2010 and 2019.
- iv) Evaluation of machine-learning models to update simulation and optimization of paddy yield under different weather conditions.
- v) Formulation of a simulation-based optimization problem to determine the optimal paddy-mix to minimize the risk associated with the yield.

5) Methodology

The methodology framework developed in this research can be applied to seed selection decisions of paddy crops and influence the farming practice positively.



6) National and international Status

Literature source	Contributions
Xu, J., Cai, H., Wang, X., Ma, C., Lu, Y., Ding, Y., & Saddique, Q. (2020). Exploring optimal irrigation and nitrogen fertilization in a winter wheat- summer maize rotation system for improving crop yield and reducing water and nitrogen leaching. <i>Agricultural Water Management</i> , 228, 105904.	The author found optimal irrigation could be adjusted in variable precipitation years in Guanzhong Plain. Maize seedling and wheat jointing stages were the sensitive phases to water deficit.
Shirley, R., Pope, E., Bartlett, M., Oliver, S., Quadrianto, N., Hurley, P., & acon, J. (2020). An empirical, Bayesian approach to modelling crop yield: Maize in USA. <i>Environmental Research Communications</i> .	The author applied an empirical, data-driven approach for describing crop yield as a function of monthly temperature and precipitation by employing generative probabilistic models with parameters determined through Bayesian inference.
Cui, J., Shao, G., Lu, J., Keabetswe, L., & Hoogenboom, G. (2020). Yield, quality and drought sensitivity of tomato to water deficit during different growth stages. <i>Scientia Agricola</i> , 77(2).	The author investigated the drought sensitivity of tomato (<i>Lycopersicon esculentum</i> Mill.) yield and quality during different growth stages, field and pot experiments were conducted in a high tunnel in southern China.
Mendez, J. M., & Dasig, D. D. (2020). Frost Prediction in Highland crops Management Using IoT-Enabled System and Multiple Regression. In <i>Internet of Things and Analytics for Agriculture</i> , Volume 2 (pp. 261-288). Springer, Singapore.	This article discusses the concepts of Precision Agriculture and applications of the Internet of things (IoT) in agriculture, the design and challenges of an IoT-enabled system for highland crops management, and utilized multiple regression as a frost prediction technique

Dong, Y., Fu, Z., Peng, Y., Zheng, Y., Yan, H., & Li, X. (2020). Precision fertilization method of field crops based on the Wavelet-BP neural network in China. Journal of Cleaner Production, 246, 118735.	The author proposes a method for the precision fertilization of maize based on the wavelet-BP neural network which increases maize production, while reducing production cost and agricultural pollution.
Meng, X., Liu, M., & Wu, Q. (2020). Prediction of Rice Yield via Stacked LSTM. International Journal of Agricultural and Environmental Information Systems (IJAEIS), 11(1), 86-95.	This article proposes Long Short- Term Memory recurrent neural network (LSTM) methods of time series prediction of Rice Yield.
Maldaner, L. F., & Molin, J. P. (2020). Data processing within rows for sugarcane yield mapping. Scientia Agricola, 77(5).	The author tested a method for sugarcane yield data cleaning, investigating if the data recording frequency influences the characterization of yield variations in mapping high-resolution spatial data within a single row.

7)Novelty in Research Proposal:

- **This research suggests a way to better ground their recommendations for seed selection decision on variety of paddy by the farmers by using the application to be built.**
- **The big data analytics framework proposed in this research, which integrates methodologies from machine learning, optimization, and simulation has great potential to improve the quality of seed selection decision, and ultimately improve farmers' crop yield.**
- **Further agricultural department community actively embraces machine-learning and data-driven decision-making methodologies to solve important problems in the agriculture domain.**
- **The method proposed for assessing the environmental impact of agriculture on the scale of a farming region cover a wide range of objectives, users and concepts.**
- **The following six main types of method used for analysis: environmental risk mapping, life cycle analysis, environmental impact assessment, multi-agent system, linear programming and agro-environmental indicators**

8) References:

- Deep transfer learning for crop yield prediction with remote sensing data ,AX Wang, C Tran, N Desai, D Lobell - Proceedings of the 1st 2018 - dl.acm.org
- Machine learning approaches for crop yield prediction and nitrogen status estimation in precision agriculture: A review,A Chlingaryan, S Sukkarieh, B Whelan - Computers and electronics in 2018.
- Deep gaussian process for crop yield prediction based on remote sensing data. J You, X Li, M Low, D Lobell... - Thirty-First AAAI ..., 2017
- Performance Evaluation of Machine Learning Techniques for Mustard Crop Yield Prediction from Soil Analysis,V Pandith, H Kour, S Singh, JManhas... - Journal of Scientific ..., 2020.
- An improved machine learning algorithm for predictingblast disease in paddy crop Sreevallabhadev Radhakrishnan July 2020.
- Deep learning approach for recognition and classification of yield affecting paddy crop stresses using field imagesArtificial Intelligence in Agriculture2020.Basavaraj S. Anami Naveen N. Malvade Surendra Palaiah
- Machine-Learning-Based Simulation for Estimating Parameters in Portfolio Optimization: Empirical Application to Soybean Variety Selection Durai Sundaramoorthi, Lingxiu Dong Olin Business School, Washington University in St. Louis.

9) Additional Information:

The research proposed is to be carried out in Madurai District

- The main aim of the project proposal is to improve the economic status of the farmer by doubling the production and tripling the income.
- For Second Green Revolution Agriculture Department has formulated various policies and strategies to achieve equitable, competitive and sustainable growth in Agriculture Crops. Madurai District is mainly agrarian with an average rainfall of 874.5 mm. Paddy, Millet, Pulses, Cotton are the major crops cultivated in Madurai District. Periyar – Vaigai canal is the main source of irrigation.
- The average yield of paddy is high in Madurai regions where the seed replacement rate is high.
- The Data collected for research is as follows:

1. Farming Population (as per 2011 census) Small Farmers – 58,716 Marginal Farmers – 2, 05,771 Agricultural Laborers- 4, 01, 867 2. No. of Block Assistant Director of Agriculture- 13 3. No. of Agricultural Extension Centre to later farmers needs of Agriculture inputs and technical advices Main AEC – 13, Sub AEC – 18 4. Seed Processing Unit – 2 State Seed Farm – 1 5. Soil Testing Laboratory – 2 Fertilizer Testing Laboratory – 1 Pesticide Testing Laboratory – 1	Liquid Bio Fertilizer Production unit – 1 Bio Control Laboratory – 1 IPM Control Laboratory – 1 Sugarcane Parasite Breeding Station – 1 6. Agricultural College & Research Institute – 1 7. Krishi Vigyan Kendra – 1 8. Total No. of Fertilizer Shops – 413 9. Total No. of PACCS – 182 10. Cropping Intensity – 1.16 11. Irrigation Intensity – 1.18
--	--

அரசு தேர்வுகள் துறை, சென்னை - 600 006.

DEPARTMENT OF GOVERNMENT EXAMINATIONS, CHENNAI - 600 006.

இடைநிலைக் கல்வி பள்ளி இறுதி வகுப்புச் சான்றிதழ்
SECONDARY SCHOOL LEAVING CERTIFICATE

பத்தாம் வகுப்பு
 X STANDARD

தமிழ்நாடு அரசின் அதிகாரத்திற்கு உட்பட்டு வழங்கப்படுகிறது
 ISSUED UNDER THE AUTHORITY OF THE GOVERNMENT OF TAMILNADU

தேர்வர் SAKTHIPRIYA D

MAR. 2003 இல்

பத்தாம் வகுப்புப் பொது தேர்வெழுதிக் கீழ்க்காணும் விழுக்காட்டு மதிப்பெண்களைப் பெற்றுள்ளார் என்று சான்றறிக்கப்படுகிறது.

Certified that the above mentioned Candidate appeared for the SSLC Public Examination and obtained the following percentage of marks :

பாடம் SUBJECT	மதிப்பெண் MARKS
மொழி LANGUAGE	83 EIGHT THREE
ஆங்கிலம் ENGLISH	73 SEVEN THREE
கணிதம் MATHEMATICS	78 SEVEN EIGHT
அறிவியல் SCIENCE	84 EIGHT FOUR
சமூக அறிவியல் SOCIAL SCIENCE	82 EIGHT TWO
மொத்தம் TOTAL	400 FOUR ZERO ZERO

பிறந்த நாள் / DATE OF BIRTH
 29.03.1988

பதிவேண் / REGISTER NO.
 162786

ம.அ.ப.குறியீட்டெண் & நாள் TMR CODE NO. & DATE
 A142586 30.05.2003

பள்ளியின் பெயர் / SCHOOL

MANGAYARKARASI HSS MADURAI.

பத்தாம் வகுப்புத் தேர்வில் தேர்ச்சி பெற ஒவ்வொரு பாடத்திலும், 100க்குக் குறாம அளவு முப்பத்தைந்து விழுக்காடு மதிப்பெண் பெறுதல் வேண்டும். இது பகுதி முறையில் தேர்வு எழுதித் தேர்ச்சி பெறுவதற்கும் பொருந்தும்.

A PASS IN THE SSLC (X STD.) EXAMINATION REQUIRES A MINIMUM OF THIRTY FIVE PERCENT OF MARKS IN EACH ONE OF THE FIVE SUBJECTS. THIS INCLUDES PASSING UNDER THE COMPARTMENTAL SYSTEM ALSO.

D. Sakthipriya
 தேர்வரின் ஒப்பம்
 Candidate's Signature

மாநிலப் பள்ளித்தேர்வுகள் குழுவும், தமிழ்நாடு
 SECRETARY
 STATE BOARD OF SCHOOL EXAMINATIONS, TAMILNADU

சான்றிதழ் வ. எண் / CERTIFICATE S No HSG 1409731

அரசுத் தேர்வுகள் இறைச் சென்னை - 600 006.

DEPARTMENT OF GOVERNMENT EXAMINATIONS, CHENNAI - 600 006.

மேனிலைப் பள்ளிக் கல்விச் சான்றிதழ் HIGHER SECONDARY COURSE CERTIFICATE

பொதுக்கல்வி / GENERAL EDUCATION

தமிழ்நாடு அரசின் அதிகாரத்திற்கு உட்பட்டு வழங்கப்படுகிறது
ISSUED UNDER THE AUTHORITY OF THE GOVERNMENT OF TAMILNADU

தேர்வர் SAKTHIPRIYA D

MAR. 2005

இல்

மேனிலைப் பள்ளி இறுதி வகுப்புத் தேர்வெழுதித் தீர்க்காணும் மதிப்பெண்களைப் பெற்றுள்ளார் என்று சான்றளிக்கப்படுகிறது.

Certified that the above mentioned candidate appeared for the Higher Secondary Examination and obtained the following marks :

பாடம் SUBJECT	கருத்தியல் THEORY 150	செய்முறை PRAC. 50	பெற்ற மதிப்பெண் 200 க்கு MARKS OBTAINED FOR 200
TAMIL			162 ONE SIX TWO
ENGLISH			116 ONE ONE SIX
PHYSICS	083	050	133 ONE THREE THREE
CHEMISTRY	081	050	131 ONE THREE ONE
COMPUTER SCIENCE	089	050	139 ONE THREE NINE
MATHEMATICS			123 ONE TWO THREE

மொத்த மதிப்பெண்

TOTAL MARKS

0804 ZERO EIGHT ZERO FOUR

பிறந்த நாள் / DATE OF BIRTH

29/03/88

பதிவேண் / REGISTER NO.

212430

ம.அ.ப.குறியீட்டெண் & நாள் / TMR CODE NO. & DATE

G093381 18.05.2005

பள்ளியின் பெயர் / SCHOOL

MANGAYARKARASI HSS MADURAI

பாடத் தொகுப்பு எண் / GROUP CODE

599

இத்தேர்வில் தேர்ச்சி பெற ஒவ்வொரு பாடத்திலும், 200க்குக் குறும் அளவு 70 மதிப்பெண் பெறவேண்டும். இது பகுதி முறையில் தேர்வெழுதித் தேர்ச்சி பெறுவதற்கும் பொருந்தும். கருத்தியல் மற்றும் செய்முறைத் தேர்வுகள் கொண்ட பாடங்களில் தேர்ச்சி பெறக் கருத்தியல் தேர்வில் 150 க்குக் குறும் அளவு 40 மதிப்பெண்களும், செய்முறைத் தேர்வில் 50க்குக் குறும் அளவு 30 மதிப்பெண்களும் பெறவேண்டும்.

MINIMUM FOR A PASS : 70 MARKS OUT OF 200 IN EACH SUBJECT. THIS INCLUDES PASSING UNDER THE COMPARTMENTAL SYSTEM ALSO. FOR THE SUBJECTS CONSISTING OF THEORY AND PRACTICAL EXAMINATIONS MINIMUM MARKS FOR A PASS IS 40 OUT OF 150 IN THEORY AND 30 OUT OF 50 IN PRACTICAL.

D. Sakthipriya

தேர்வரின் ஒப்பம்
Candidate's Signature

HSCC / G

செயலாளர்

மாநிலப் பள்ளித்தேர்வுகள் (தமிழ்நாடு)

SECRETARY

STATE BOARD OF SCHOOL EXAMINATIONS, TAMILNADU



MADURAI KAMARAJ UNIVERSITY

B.Sc. COMPUTER SCIENCE (SEMESTER)

STATEMENT OF MARKS

SSG 30025559

NAME OF THE CANDIDATE			REGISTER NO		CENTRE NO		COLLEGE OF STUDY			EXAM		DATE OF PUBLICATION			
SMATHI PRIYA D			AS112127		251		MANGAYARKARASI ARTS AND SCIENCE COLLEGE FOR WOMEN, MADURAI			MAY 2006		20-JUN-2008			
SUB CODE	SUBJECT DESCRIPTION	MAX MARKS		MARKS OBTAINED		SUB CODE	SUBJECT DESCRIPTION	MAX MARKS		MARKS OBTAINED					
		I	E	I	E			I	E	I	E				
1A1	TAMIL PAPER - I	100	100	76	76 P	NO5	MICROPROCESSOR & ASSEMBLY LANGUAGE PROGRAMMING	100	100	72	72 P	NO6			
1A2	TAMIL PAPER - II	100	100	75	75 P	NO6	OBJECT ORIENTED PROGRAMMING	100	100	55	55 P	NO6			
1A3	TAMIL PAPER - III	100	100	67	67 P	NO6	RESOURCE MANAGEMENT TECHNIQUES	100	100	60	60 P	NO7			
1A4	TAMIL PAPER - IV	100	100	71	71 P	NO7	VISUAL PROGRAMMING	100	100	57	57 P	NO7			
3A1	ENGLISH PAPER - I	100	100	52	52 P	NO5	SYSTEM SOFTWARE	100	100	47	47 P	NO7			
3A2	ENGLISH PAPER - II	100	100	63	63 P	NO6	DBMS	100	100	58	58 P	NO7			
3A3	ENGLISH PAPER - III	100	100	53	53 P	NO6	FUNDAMENTALS OF COMPUTER ALGORITHM	100	100	51	51 P	NO7			
3A4	ENGLISH PAPER - IV	100	100	44	44 P	NO7	JAVA PROGRAMMING	100	100	48	48 P	NO7			
MX1	LAB 1 - DIGITAL ELECTRONICS	100	100	95	95 P	NO5	COMPUTER NETWORKS	100	100	56	56 P	NO7			
MX2	LAB 3 - DIGITAL DESIGN LANGUAGE PROGRAMMING	100	100	94	94 P	NO6	SOFTWARE ENGINEERING	100	100	53	53 P	NO8			
MX3	LAB 5 - MICROPROCESSOR & ASSEMBLY LANGUAGE PROGRAMMING	100	100	84	84 P	NO7	WEB DESIGNS	100	100	52	52 P	NO8			
MX4	LAB 7 - LINUX/UNIX	100	100	95	95 P	NO7	COMPUTER GRAPHICS	100	100	36	36 P	NO8			
MX5	LAB 9 - JAVA PROGRAMMING	100	100	94	94 P	NO8	OPERATING SYSTEM	100	100	44	44 P	NO8			
MX7	LAB 11 - WEB DESIGNING	100	100	94	94 P	NO8	LAB 2 - PROGRAMMING IN C	100	100	99	99 P	NO5			
MXA	MATHEMATICAL FOUNDATIONS - I	100	100	93	93 P	NO5	LAB 4 - DATA STRUCTURE USING C	100	100	100	100 P	NO6			
MXB	DIGITAL PRINCIPLES & APPLICATIONS	100	100	60	60 P	NO5	LAB 6 - DOP USING C++	100	100	100	100 P	NO6			
MXC	PROGRAMMING IN C	100	100	46	46 P	NO5	LAB 8 - VISUAL PROGRAMMING	100	100	88	88 P	NO7			
MXD	MATHEMATICAL FOUNDATIONS-II	100	100	52	52 P	NO6	LAB 10 - MULTIMEDIA PROGRAMMING	100	100	88	88 P	NO7			
MXE	COMPUTER ORGANIZATION	100	100	57	57 P	NO6	LAB 12 - VB NET PROGRAMMING	100	100	90	90 P	NO8			
MXF	FUNDAMENTALS OF DATA STRUCTURES	100	100	58	58 P	NO6	PART IV - GENERAL KNOWLEDGE	100	100	72	72 P	NO7			
MXG	NUMERICAL METHODS	100	100	70	70 P	NO6	PART V - ENVIRONMENTAL STUDIES	100	100	92	92 P	NO8			
CLASS		PART I - FIRST		PART II - SECOND		PART III - FIRST		TOTAL MARKS		PART I - 0289/400		PART II - 0212/400		PART III - 2178/2200	
		PASSING MINIMUM - 35%													

Signature of the Candidate

Pakshia Nagar,
Madurai - 625 021

Other Abbreviations - R - Result; P - Pass; F - Fail; AAA - Absent; SUB - Subject; M - Month;
(A - April; N - November) YR - Year; MAX - Maximum; I - Internal; E - External; T - Total

S. K. S. SHANMUGIAH
Controller of Examinations



THIAGARAJAR COLLEGE OF ENGINEERING

(AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, TIRUNELVELI)
MADURAI - 625 015.



MASTER OF COMPUTER APPLICATION DEGREE EXAMINATION

GRADE CARD

SL. NO.126276

Name of the Candidate : SAKTHI PRIYA, D. (W)								Reg. No. 08Y35			
Exam Month & Year : APR/2011								Dt. of publication 31/05/2011			
COURSE CODE	CREDITS	GRADE	M/Y	COURSE CODE	CREDITS	GRADE	M/Y	COURSE CODE	CREDITS	GRADE	M/Y
FIRST SEMESTER				SECOND SEMESTER				THIRD SEMESTER			
Y11	4	C	N08	Y21	4	C	A09	Y31	4	D	N09
Y12	4	B	N08	Y22	4	B	A09	Y32	4	D	N09
Y13	4	D	N08	Y23	4	C	A09	Y33	4	C	N09
Y14	4	D	N08	Y24	4	C	A09	Y34	4	B	N09
Y15	4	B	N08	Y25	4	C	A09	Y35	4	C	N09
Y16	2	S	N08	Y26	2	A	A09	Y36	2	A	N09
Y17	2	A	N08	Y27	2	A	A09	Y37	2	A	N09
COURSE CODE	CREDITS	GRADE	M/Y	COURSE CODE	CREDITS	GRADE	M/Y	COURSE CODE	CREDITS	GRADE	M/Y
FOURTH SEMESTER				FIFTH SEMESTER				SIXTH SEMESTER			
Y41	4	B	A10	Y51	4	C	N10	Y61	12	S	A11
Y42	4	D	A10	Y52	4	B	N10				
Y43	4	B	A10	Y53	4	C	N10				
Y44	4	C	A10	Y5D	4	C	N10				
Y4D	4	B	A10	Y5F	4	C	N10				
Y46	2	B	A10	Y56	2	B	N10				
Y47	2	S	A10	Y57	2	S	N10				

Medium of Instruction is ENGLISH

Enrolment No.

MCA-1131

Semester

GPA

Credits Registered

Credits Earned

Total Credits Earned

CGPA

Class obtained

I	II	III	IV	V	VI
7.42	7.50	7.17	7.67	7.50	10.00
24	24	24	24	24	12
24	24	24	24	24	12
132					
7.68					



III-SEMESTER	
Y11 DISCRETE STRUCTURES	
Y12 PROGRAMMING IN C	
Y13 COMPUTER ORGANIZATION AND ARCHITECTURE	
Y14 DATA STRUCTURES	
Y15 DATABASE MANAGEMENT SYSTEMS	
Y16 C PROGRAMMING LABORATORY (PROBLEM SOLVING APPROACH)	
Y17 RDBMS LABORATORY	

IV-SEMESTER	
Y41 DATA MINING AND WAREHOUSING	
Y42 WEB TECHNOLOGIES	
Y43 OBJECT ORIENTED ANALYSIS AND DESIGN	
Y44 STORAGE MANAGEMENT TECHNOLOGIES(E)	
Y4D ELECTRONIC COMMERCE(E)	
Y46 WEB TECHNOLOGY LAB	
Y47 SOFTWARE ENGINEERING LAB	

II-SEMESTER	
Y21 MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	
Y22 OBJECT ORIENTED PROGRAMMING USING C ++	
Y23 DESIGN AND ANALYSIS OF ALGORITHMS	
Y24 OPERATING SYSTEMS	
Y25 FINANCIAL MANAGEMENT & ACCOUNTING	
Y26 DATA STRUCTURES USING C++ LAB	
Y27 VISUAL PROGRAMMING LAB	

V-SEMESTER	
Y51 MIDDLEWARE TECHNOLOGIES	
Y52 OPERATIONS RESEARCH	
Y53 SOFTWARE TESTING TECHNIQUES	
Y5D ENTERPRISE RESOURCE PLANNING(E)	
Y5F MOBILE APPLICATIONS(E)	
Y56 MIDDLEWARE TECHNOLOGIES LAB	
Y57 APPLICATION DEVELOPMENT LAB	

III-SEMESTER	
Y31 NUMERICAL AND STATISTICAL METHODS	
Y32 INTERNET AND JAVA PROGRAMMING	
Y33 COMPUTER NETWORKS	
Y34 SOFTWARE ENGINEERING	
Y35 ADVANCED DATABASE MANAGEMENT SYSTEMS	
Y36 INTERNET AND JAVA PROGRAMMING LAB	
Y37 COBOL PROGRAMMING LAB	

VI-SEMESTER	
Y61 PROJECT/VIVA VOCE	

CONDITIONS

- Any alteration or overwriting makes this statement of mark invalid
- Any discrepancy in the above entries must be brought to the notice of the CONTROLLER OF EXAMINATIONS immediately.

Controller of Examinations

Date: 01/06/2011



MADURAI KAMARAJ UNIVERSITY

MASTER OF PHILOSOPHY - COMPUTER SCIENCE

STATEMENT OF MARKS

KPVK 1

995669

NAME OF THE CANDIDATE		REGISTER NO.	DATE OF PUBLICATION
SAKTHIPRIYA D		85811712	12-JUL-2016
COLLEGE OF STUDY		CENTRE NO.	EXAM M & YR
SRI SAI BHARATH COLLEGE OF ARTS & SCIENCE		603	APR 2016

SUB CODE	SUBJECT DESCRIPTION	MAX MARKS			MARKS OBTAINED					
		E	T		E	T	R	M & YR		
CS1	RESEARCH METHODOLOGY	040	040	100	038	027	065	P N15		
CS2	CRYPTOGRAPHY AND NETWORK SECURITY	040	040	100	036	029	065	P N15		
CS8	DIGITAL IMAGE PROCESSING	040	040	100	040	029	067	P N15		
CSV	VIVA-VOCE AND DESSERTATION	050	150	200	046	145	191	P A16		
CCC	END OF STATEMENT									

The Candidate has passed
the VIVA-VOCE on 13/09/2017

CLASS	FIRST	TOTAL MARKS	6396/500
-------	-------	-------------	----------

Signature of the Candidate

Any alteration or overwriting makes this Statement of Marks Invalid.

Paikalai Nagar,
Madurai - 625 021.

PASSING MINIMUM EXTERNAL - 45%.

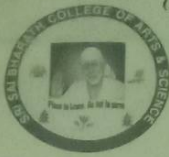
AGGREGATE - 50%

Other Abbreviations - R-Result; P-Pass; RA-Reappearance; AAA-Absent; SUB-Subject; M-Month;
(A-April; N-November) YR - Year; MAX - Maximum; H-Internal; E-External; T-Total

Controller of Examinations

ISSUED ON 23/02/2018

SRI SAI BHARATH COLLEGE OF ARTS AND SCIENCE



(Approved by Government of Tamil Nadu, Affiliated to Madurai Kamaraj University
Recognized by University Grants Commission (UGC) Under Section 2(f) Status)

Navamarathupatty, Dindigul, Tamil Nadu-624710.

Tel : +91- 85080 60522, 85080 60533.

Website : www.srisaibharathgroup.org | Email : ssbcas@gmail.com

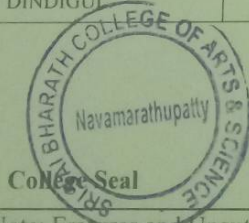
TRANSFER CERTIFICATE

Serial No. TC/2017/06

Register No. BS811712

1. Name of the Student	In English	SAKTHIPRIYA.D
	In Tamil	சக்திபிரியா.டி
2. Name of the Father		DHIVAKARAN.M
3. Nationality		Indian
4. Religion		Hindu / Christian / Muslim
5. Community / Caste		BC - JAGAMUNATHAR
6. Sex		Male ☐ Female ☒
7. Date of Birth		29 03 1988
8. Date of Admission		05-09-2015
9. Whether the pupil has Passed the Programme		Mphil - C.S
10. Whether the student was in receipt of any Scholarship (Nature of the Scholarship to be Specified) or any Educational Concessions		
11. Conduct and Character		Good
12. Date on which the student actually left the College		05-10-2016
13. Date on which the student for Transfer Certificate was Made		09-12-2017
14. Date of issue of Transfer Certificate		09-12-2017
15. Details of Programmed of Study		Mphil - C.S

Name of the College	Academic Year	Course Studied	Part III Core Subject	First Language	Medium of Instruction
SRI SAI BHARATH COLLEGE OF ARTS AND SCIENCE, DINDIGUL	2015 - 2016	Mphil C.S			ENGLISH



Signature of the Principal with Date

Note: Erasures and Unauthenticated or fraudulent alterations in the Certificate will lead to its Cancellation.

Declaration:

- I hereby declare that the particulars recorded against items 1 to 7 are correct and that no change will be demanded by me in future.
- I affirm I have received my Transfer Certificate and all my original certificates.

Signature of the Parent / Guardian

Signature of the Student with Date



ULTRA College of Engineering & Technology for Women

(Approved by AICTE and Affiliated to Anna University of Technology Madurai)

Ultra Nagar, Madurai - Chennai Highway, Madurai - 625 104

Dr. SM. Kannan M.E., Ph.D.,
Principal

Phone (off): 0452 - 2422057, Fax: 0452 - 2422056

Web: www.ucetw.ac.in, e-mail : ultramadurai@rediffmail.com

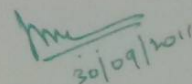
Ref: ADM/2011/2074

30.09.2011

Service Certificate

Ms. D. Sakthi Priya, worked as Software Developer in the Department of Computer Science and Engineering from 20.05.2011 to 30.09.2011.

Salary last drawn: Rs. 8,000/- per month Consolidated


30/09/2011

Principal



LADY DOAK COLLEGE

MADURAI – 625 002, TAMIL NADU, INDIA
(An Autonomous College affiliated to Madurai Kamaraj University)
Reaccredited by NAAC with 'A' Grade & ISO 9001:2008 certified
"College with Potential for Excellence"

Dr. A. Mercy Pushpalatha, M.Sc., M.Phil., Ph.D
Principal & Secretary

Ph: 0452-2530527, 2524575
Fax: 0452-2523585

4.4.2012

Service Certificate

This is to certify that Ms. D. Sakthi Priya., M.C.A., has worked as substitute lecturer in the Department of Computer Sciences (Self-Financed), at Lady Doak College, Madurai from 3rd January 2012 to 4th April 2012.

A. Mercy Pushpalatha

(A. Mercy Pushpalatha)
Principal &
Principal & Secretary

LADY DOAK COLLEGE
MADURAI-2.



LADY DOAK COLLEGE

MADURAI – 625 002, TAMIL NADU, INDIA
(An Autonomous College affiliated to Madurai Kamaraj University)
"College with Potential for Excellence"
ISO 9001:2008 certified

Dr. A. Mercy Pushpalatha, M.Sc., M.Phil., Ph.D
Principal & Secretary

Ph: 0452-2530527, 2524575
Fax: 0452-2523585

19.11.2012

SERVICE CERTIFICATE

This is to certify that Ms. D. Sakthi Priya, M.C.A., has worked
as Assistant Professor in the Department of Computer Science
(Self-financed) at Lady Doak College, Madurai from 18th June 2012
to 20th October 2012.

A. Mercy Pushpalatha
Principal & Secretary

Principal & Secretary
LADY DOAK COLLEGE
MADURAI - 2.



Phone : 0452-2913135, 89030 10884

Mobile : 99655 - 03926

Telefax : 0452-4520008

LATHA MATHAVAN ENGINEERING COLLEGE

(An ISO 9001 : 2008 Certified Institution)

(Approved by AICTE, New Delhi and Affiliated to Anna University of Technology Madurai)

Latha Mathavan Nagar, Kidaripatti (Post), Alagar Kovil, Madurai - 625 301.

Website : www.lathamathavan.edu.in Email : lmecmdu@yahoo.co.in

Prof.Dr.S.MARIMUTHU, M.E., Ph.D.,
Principal

Date :

Lr. No. LMEC / SC / 178 / 2013

31.07.2013

SERVICE CERTIFICATE

This is to certify that **Mrs. D. Sakthipriya** , has served as Programmer –
Computer Science Engineering department, in our institution from 23.01.2013 to
31.07.2013.

S Man

PRINCIPAL



To

Mrs. D. Sakthipriya,
Programmer / CSE
LMEC.

CC to

File (Establishment)



MANGAYARKARASI COLLEGE OF ARTS & SCIENCE FOR WOMEN

Affiliated to Madurai Kamaraj University

Re-Accredited with B Grade by NAAC | An ISO 9001 : 2015 Certified Institution

Date: 22.12.2020

SERVICE CERTIFICATE

This is to certify that Mrs.D.Sakthipriya MCA.,M.Phil., working as Assistant Professor in the Department of Computer Science from 25.07.2016 till date. During the tenure her conduct is good.

Director
MANGAYARKARASI COLLEGE OF
ARTS & SCIENCE FOR WOMEN
Paravai, Madurai-625 402



7-1-139, Mangayarkarasi Nagar,
Paravai, Madurai - 625 402.



95007 06435



www.mcw-madurai.org



mangaiarts1997@gmail.com
mcw@mcw-madurai.org

आयकर विभाग

भारत सरकार

INCOME TAX DEPARTMENT



GOVT. OF INDIA



स्थायी लेखा संख्या कार्ड
Permanent Account Number Card
HNEPS2516D

नाम / Name

SAKTHIPRIYA D

पिता का नाम / Father's Name

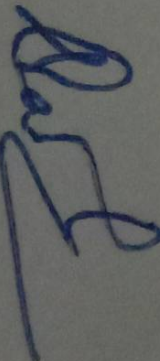
SUNDARAPANDIAN

जन्म की तारीख / Date of Birth

29/03/1988

①. 
हस्ताक्षर / Signature



①. 



இந்திய அரசாங்கம்
Identification Authority of India
Government of India

பதிவு அடையாளம் / Enrollment No.: 2007/20695/04831

To
சக்திபிரியா தினகரன்
Sakthipriya Dhinakaran
D/O: Dinakaran
NO 15B PANJAVARNAM COMPOUND
KULAMANKALAM MAINROAD
SELLUR
Madurai North
Tallakulam
Madurai North Madurai
Tamil Nadu 625002
9786837803

30/06/2013
35761084



MN357610841FT



உங்கள் ஆதார் எண் / Your Aadhaar No. :

5428 7549 8739

ஆதார் - சாதாரண மனிதனின் அதிகாரம்



இந்திய அரசாங்கம்
Government of India



சக்திபிரியா தினகரன்
Sakthipriya Dhinakaran
தந்தை : தினகரன்
Father : Dinakaran
பிறந்தவருடம் / Year of Birth : 1988
பெண்பால் / Female



5428 7549 8739

ஆதார் - சாதாரண மனிதனின் அதிகாரம்

D. [Signature]

B3/2007/689/05

GCP-26-1-2,00,000 Cps.-10-6-2004

R.Dis...../200 dt.

BC

சான்றிதழ் எண் :
Certificate No. :மாவட்டக் குறியீடு எண் :
District Code :வட்டக் குறியீடு எண் :
Taluk Code :கிராமக் குறியீடு எண் :
Village Code :

1	4
0	1
0	N
M	

6258736

சாதிச் சான்றிதழ்
COMMUNITY CERTIFICATE

மதுரை மாவட்டம் மதுரை தெற்கு வட்டம்
வடக்கு மதுரை கிராமம்/நகரம், திரு / திருமதி / செல்வி/
செல்வன் தகப்பனார்/கணவர்
பெயர்.....

இந்து - அகமத்யா

வகுப்பைச் சார்ந்தவர், அாக ஆணை நிலை எண் 28, பிற்பட்ட மற்றும்
மிகவும் பிற்பட்ட பிரிவின் நலத் துறை, நாள் 19-7-1994 வரிசை எண் 1 படி
பிற்பட்ட பிரிவினைச் சார்ந்தவர் எனச் சான்றளிக்கப்படுகிறது.

This is to certify that D. SAKTHI PRIYA Son / Daughter of
Thiru M. DINAKARAN of SELLUR
Village / Town, MADURAI SOUTH Taluk,

District of the State of Tamil Nadu belongs to
HINDU - AGAMUDAIYAR Community, which is recognised as
a Backward Class as per Government Order (Ms.) No. 28, Backward Classes
and Most Backward Classes Welfare, dated 19th July 1994
vide Serial No.1.....

2. திரு / திருமதி / செல்வன் / செல்வி D. சக்தி பிரியா
என்பவரும் அவருடைய குடும்பத்தினரும் தமிழ்நாட்டில் மதுரை
மாவட்டத்தில் மதுரை தெற்கு வட்டத்தில் 150, பனங்கட்டைத் தோடு
கிராமத்தில் / நகரத்தில் வசித்து வருகிறார்கள் எனச் சான்றளிக்கப்படுகிறது. மதுரை - 2

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

முத்திரை
Seal

கையொப்பம் :

Signature :

நாள் :

Date :

பெயர் (காலை எழுத்துக்களில்)
Name in Capital Letters :பதவி
Designation :

Selvan
Head
Deputy
Madurai South

ANNEXURE-I
CERTIFICATE FROM THE ORGANISATION WHERE THE CANDIDATE IS EMPLOYED

Certified that Mr./Ms./Mrs. D. SAKTHIPRIYA MCA., M.phil., is
employed as ASSISTANT PROFESSOR (Designation) in the
Computer Science (Department/Division Name)
of Mangayarkarasi College of Arts & Science
(Institution/Industry Name). for women,
Madurai.

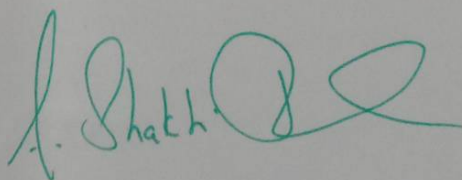
We have no objection in forwarding his/her application for the Ph.D. Research Programme.

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: 11/12/2020

Signature of the Head of Organization with office seal

Director
MANGAYARKARASI COLLEGE OF
ARTS & SCIENCE FOR WOMEN
Paravai, Madurai-625 402