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Skills

- 22 years' experience in the education field
- Energetic, dynamic approach to teaching.
- Very enthusiastic. Quickly establish strong relationships with students.
- Creative thinker. Enjoy challenging young minds.
- Forthright and assertive. A friendly, competent and hardworking employee.
- Strong organization and motivation skills.

Present Position	Asst. Professor & Head Dept. of Data Science, Holy Cross College, Tiruchirappalli – 2.
Research Area	Psychology of Computer Programming, Cloud Computing, Machine Learning
International Journal Publications	24
Book Publication	2
Book Chapter Publication	21
Acted as Resource Person	19
Awards	1
No. of Ph.D. Scholars Guiding	4

Educational Qualification

Education Qualification	College & University	Year ofpassing	Percentage
Ph. D	Jamal Mohamed College, Bharathidasan University Tiruchirappalli - 20	Oct 2017	90
State Eligibility Test (SET) in Computer Science and Applications	Bharathiar University	Oct 2012	65
National Educational Test (NET) (UGC) inComputer Science andApplications	UGC	June 2012	55
B.Ed.	Jai Sai college, Uttayanpatti, Tiruchirappalli -77	June 2011	71
M.Phil Computer Science	(Distance Education) Bharathidasan University Tiruchirappalli – 20	May 2005	85
M.C.A	St. Joseph's College Bharathidasan University Tiruchirappalli – 2	May 1996	72
B.Sc Physics	Holy Cross College, Bharathidasan University Tiruchirappalli – 2	May 1993	82
XII	St. Philomena's Girls' Hr.Sec. School, Melapudur Tiruchirappalli -1.	May 1990	81
X	St. Philomena's Girls' Hr.Sec. School, Melapudur Tiruchirappalli -1.	May 1988	82

Professional Experience

Organization	Period	Designation
Holy Cross College, Trichy	Jun 2024 – Till Date	Asst. Professor & Head Dept. of Data Science
St. Joseph's College, Trichy	Jun 2019 – May 2024	Asst. Professor, Dept. of Information Technology
St. Joseph's College, Trichy	Jun 2016 – Jul 2019	Asst. Professor & Head, Dept. of Information Technology
St. Joseph's College, Trichy	Jun 2011 – May 2016	Asst. Professor, Dept. of Information Technology Handled various courses at Under-graduate and Post-Graduate levels.
St. Joseph's College, Trichy	Jun 2007 – Nov 2008	Asst. Professor, Dept. of Information Technology Handled various courses at Under-graduate and Post-Graduate levels.
Bharathidasan University, Trichy	Nov 2005 – May 2006	Guest Lecturer, Dept. of Computer Science Handled various courses at Under-graduate and Post-Graduate levels
Holy Cross College, Trichy	Jun 2003 – Nov 2005	Asst. Professor & Head, Dept. of Computer Science Framed syllabi for Under-graduate and Post-graduate courses. Organized various workshops for staff and students.
Holy Cross College, Trichy	Jun 1998 – Jun 2003	Asst. Professor, Dept. of Computer Science Handled various courses at Under-graduate and Post-Graduate levels.

Ph. D Dissertation

Title

Abstract

Infrastructure as a Service (IaaS) is one of the common Cloud service models, which is most used by the scientific applications. As the users are charged only for the usage of resources based on the Service Level Agreements (SLA), the users are attracted towards the IaaS. Workflow scheduling is a complex issue in IaaS because multiple scheduling parameters are to be considered to satisfy the Quality of Service parameters. Workflow applications comprises of various sub-tasks, which are to be executed in a particular method. These tasks have parent child relationship. The parent task needs to be executed beforeits child task. Workflow scheduling algorithms are supposed to preserve dependency constraints implied by their nature and structure. Resources are allocated to various sub-tasks of the original task by keeping into account these constraints. The role of workflow scheduling algorithm is to find the schedule which satisfies the SLA document which is written between a cloud user and a cloud service provider. Many heuristic algorithms were proposed in the literature, targeted only a single parameter for scheduling. But the user mayrequire multiple objectives to be satisfied such as cost optimization, makespan optimization, reliability, deadline constrained, budget constrained etc. Hence, it is the responsibility of the Scheduling algorithm to find the optimal schedule that satisfies the SLA.

In this research work, four algorithms CFCSC, LBTP, WSGA and DEWS are proposed. The objectives of all the four algorithms are to minimize the overall execution time of theapplication and to minimize the cost of executing the application. All four algorithms assume the following assumptions :

A set of heterogeneous virtual machines (VMs) denoted by M are considered for creating cloud environment.

The communication network is always connected. Tasks areexecuted normally and there are no failures.Tasks are non-preemptive

Based on the number of tasks in the input DAG, the resources needed for the DAG is decided using the equation r= ⌊ n ⌋ where n is the number of tasks in the application and r is the number of resources(virtual machines) needed for computation. The pricing model adopted for calculating the cost of execution of the application are decided based on the Google AppEngine pricing Model. Arbitrary task graphs and Regular scientific workflow applications are supplied to all the algorithms and their performance in the form overall execution time and the cost of execution are recorded. The performance of the algorithms in the Workflowsim (Extension of Cloudsim) tool are also documented and found that they give better results compared to the simulated Java environment. Among the four proposed algorithms DEWS, the Differential Evolution Algorithm for Workflow Scheduling (DEWS) for Public Cloud yields optimal results with respect to the scheduling parameters makespan and cost.

carried out to discover if there were any factors which tended to

Perform better at one specific task, in this case comprehension. The factors taken for this study were the gender and personality characteristics of the respondents. This study investigated if there was any effect between the gender and the comprehension of the respondents and found that there was a relationship between them. The study also found that male respondents with cooperativeness, high emotional stability performed significantly better than the female respondents on the task.

Book Publications

	Book Title	Publisher	Edition	ISBN	Year
1.	Computer Literacy - WML	St Joseph's College	1	0	2014
2.	Advanced Engineering Researchand Applications, Vol. II - chapter26"Scheduling Framework for Regular Scientific Workflowsim Cloud"	Research India	1	9789386138583	2017
3.	Performance Enhancing WorkflowScheduling for Cloud	Scholars Press	1	9786202305310	2017
4.	Computer Literacy – Unit V :CyberCrime	St Joseph's College	1	0	2017
5.	Lesson Writer for the CDE-MCAProgramme - Core Course VIII - Programming in Java	Bharathidasan University	1	0	2017
6.	Novel Practices and Trends in Grid and Cloud Computing _IGI Global--chapter 8 Edge-Cloud_-The-Future-Technology-for-Internet-of-Things	IGI Global	1	1522590234	2019
7.	Chapter Title: Big Data ManagementSolutions for IoT: Case Study: Connected car	CRC Press	1	97810030367391	2020
8.	Chapter Title: Big Data Programming Models for IoT Data	CRC Press	1	9780367342890	2020
9.	Chapter Title: Framework for approaching Blockchain in Healthcareusing Machine Learning, BOOK TITLE: Blockchain and Machine Learning for e-Healthcare Systems.	CRC Press	1	978-1-83953-114	2020

10. Chapter title: Machine Learning Based Case Studies for Healthcare Analytics in Book: Machine Learning and Analytics in Healthcare Systems	CRC Press, Taylor & Francis	1	9781003185246	2021
11. Chapter Title: Blockcain and MachineLearning for e-Healthcare Systems	IET, UK	1	97818395114	2020
12. Chapter Title: An Industrial IoT Approach for Pharmaceutical Industry Growth-- Accelerating data acquisition process in the pharmaceutical industry using Internet of Things	Elsevier	1	9780128213261	2020
13. Chapter Title: Blockchain in BookBlockchain, Internet of Things, and Artificial Intelligence	CRC Press, Taylor & Francis	1	9780429352898	2021
14. Chapter Title: Storage, System Security and Access Control for BigData IoT in Book Blockchain, Internet of Things, and Artificial Intelligence	CRC Press, Taylor & Francis	1	9780429352898	2021
15. Chapter Title: Smart e-learning transition using big data: perspectivesand opportunities in Book E-learningMethodologies Fundamentals, technologies and applications	IET, UK	1	97818395312	2021
16. Chapter Title: Machine Learning– Based Case Studies for Healthcare Analytics in Book Machine Learningand Analytics in Healthcare Systems	CRC Press	1	9781003185246	2021
17. Chapter Title: Edge Cloud: The FutureTechnology for Internet of Things in Book Research Anthology on Edge Computing Protocols, Applications, and Integration	IRMA	1	9781668457009	2022
18. Chapter Title: Behavioral malware detection and classification using deep learning approaches in Book Applications of Computational Intelligence in Multi-Disciplinary Research	Elsevier	1	978-0-12-823978-0	2022

19. Chapter Title: Influence of Cognitive Computing in Healthcare Applications in Book Cognitive Intelligence and Big Data in Healthcare	Scrivener Publishing LLC	1	9781119768883	2022
20. Chapter Title: Industrial IoT in SmartManufacturing in Book Smart Mobility and Intelligent Transportation Systems for Commercial and Hazardous Vehicles	Apple Academic Press, USA	1	9781032684048	Nov 2024
21. Chapter Title: Convergence of IoT, Artificial Intelligence and Blockchain Approaches for Supply Chain Management, in Book: Blockchain, IoT, and AI Technologies for Supply Chain Management Apply Emerging Technologies to Address and Improve Supply Chain Management	Apple Academic Press, USA	1	979-8-8688-0315-4	Aug 2024

International Journal Publication

1. R.Ruth Belina, T. Lucia Agnes Beena, Elasticnet Regressive Bagging Classification for Student Academic Performance Prediction Based on Smartphone Addiction, International Journal of INTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING, Elsevier, Vol. 12, Issue : 4, pp. 1709–1716, 2024, ISSN:2147-67992147-6799, Scopus Indexed Journal
2. Nithya, R., Kokilavani, Dr.T. Lucia Agnes Beena, T.L.A. Balancing cerebrovascular disease data with integrated ensemble learning and SVM-SMOTE. Netw Model Analalysis Health Inform Bioinforma 13, 12 (2024). UGC Approved Journal
3. Nithya, R., Kokilavani, Dr.Lucia Agnes Beena. (2024). Cerebral Stroke Classification Using Over Sampling Technique and Machine Learning Models. In: Shukla, S., Sayama, H., Kureethara, J.V., Mishra, D.K. (eds) Data Science and Security. IDSCS 2023. Lecture Notes in Networks and Systems, vol 9(22). Springer, Singapore.
4. Amala Deepa, V., and T. Lucia Agnes Beena. "A Survey on Heart Disease Prediction Using Machine Learning Techniques." In International Conference on Applied Intelligence and Informatics, pp. 243-254. Cham: Springer Nature Switzerland, 2023.
5. Dr. T. Lucia Agnes Beena, A. Antony Sushana Vinoliya, “The Method of Providing for IOE-Behaviours, International Journal of Scientific Research in Computer Science Applications and Management Studies, Volume 8, Issue 2, March 2019, *UGC Approved Journal*.
6. Dr. T. Lucia Agnes Beena, E. Solomon Raja, “Effectiveness of Online Education over Traditional Education”, International Journal of Scientific Research in Computer Science Applications and Management Studies, Volume 8, Issue 1, January 2019, *UGC Approved Journal*.

7. Dr. T. Lucia Agnes Beena, B. Antoniyammal, “Tweet Segmentation and Classification for Rumour Identification Using KNN Approach”, International Journal of Scientific Researchin Computer Science Applications and Management Studies, Volume 8, Issue 1, January 2019, *UGC Approved Journal*.
8. Dr. T. Lucia Agnes Beena, “Energy Efficient Workflow Scheduling Algorithms for Cloud Data Centers”, International Journal of Scientific Research in Computer Science Applications and Management Studies, Volume 7, Issue 4, July 2018, UGC Approved Journal.
9. Dr. T. Lucia Agnes Beena, A. Irudhaya Amala Benitta, ”Analyze of Mobile Shopping Using Naivebayes Classifier' in the International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET), Volume 4, Issue 8, May-June-2018, Impact factor: 4.916, UGC Approved Journal.
10. Dr. T. Lucia Agnes Beena, S. Jegan Benish**, “**Securing Data Storage in Cloud with Generating OTP using SHA Algorithm”, International Journal of Scientific Research in Computer Science, Engineering and Information Technology (IJSRCSEIT), Volume 3, Issue5, May-June 2018, Impact factor: 4.032, UGC Approved Journal.
11. Dr. T. Lucia Agnes Beena, J. Jenifer Lawanya, “Simulators for Cloud Computing - A Survey”, International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET), Volume 4, Issue 4, March-April-2018, Impact factor: 4.916, UGC Approved Journal.
12. Dr. T. Lucia Agnes Beena, "Resource Utilization of Workflow Scheduling Algorithms in Public Cloud", International Journal of Scientific Research in Science, Engineering and Technology, Vol. 4, pp. 1132 - 1140, 2018, Impact factor: 4.916, UGC Approved Journal.
13. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Workflow Scheduling for Public Cloud using Genetic Algorithm (WSGA)”, IOSR Journal of Computer Engineering (IOSR- JCE) e-ISSN: 2278-0661,p-ISSN: 2278-8727, Volume 18, Issue 3, PP 23-27, May- Jun. 2016, Impact factor : 1.213, UGC Approved Journal
14. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Differential Evolution Algorithm for Workflow Scheduling (DEWS) in Public Cloud”, International Journal of Control Theory and Applications, Vol. 9, No. 27, pp. 43 – 50, ISSN No:0974-5572, Oct 2016, Scopu sindexed Journal.
15. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Analysis of Task Scheduling Algorithm in fine-grained and course-grained DAGs in Cloud environment”, International Journal of Fuzzy Mathematical Archive (IJFMA), India, Jan 2015, Impact factor : 1.137, UGC Approved Journal.
16. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Customer Facilitated Cost-based Scheduling (CFCSC) in Cloud”, Procedia Computer Science, Elsevier Publication, Vol. 46C, pp. 660-667, April 2015, Scopus indexed Journal.
17. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Scheduling Framework for Regular Scientific Workflows in Cloud”, International Journal of Applied Engineering Research (IJAER) - Vol. 10, No.82, pp. 267 -271, Dec 2015, Scopus indexed and UGC Approved Journal.
18. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Level Based Task Prioritization Scheduling for Small Workflows in Cloud Environment”, Indian Journal of Science and Technology, Vol 8. No. 33, pp. 1 -7, DOI: 10.17485/ijst/2015/v8i33/71741, Dec 2015, Scopus indexed Journal.
19. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Cloud Scheduling – A Survey”, International Journal of Computer Applications, Published by Foundation of Computer Science, New York, USA, Vol. 97, Issue 13, pp. 27-31, July 2014, Impact factor : 0.752.
20. V. Maria Antoniate Martin, T. Lucia Agnes Beena, “Prediction of Association among Numerical Aptitude, Programming Skills, Trait, Emotional Intelligence on Students Performance”, International Journal on Computer Science and E ngineering (IJCSE), Vol. 3, pp.1639 - 1646,

2012

21. L. Arockiam, T. Lucia Agnes Beena, Kanagala Uma, H. M. Leena, “Object-Oriented program comprehension and personality traits”, Proceedings of Software Measurement European Forum 2005, International event, Rome, pp: 123-129, March 2005.
22. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Analysis of Task Scheduling Algorithm in fine-grained and course-grained DAGs in Cloud environment”, International Journal of Fuzzy Mathematical Archive (IJFMA), India, Jan 2015, Impact factor : 1.137, UGC Approved Journal.
23. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Customer Facilitated Cost-based Scheduling (CFCSC) in Cloud”, Procedia Computer Science, Elsevier Publication, Vol. 46C, pp. 660-667, April 2015, Scopus indexed Journal.
24. Dr. D. I. George Amalarethinam, T. Lucia Agnes Beena, “Scheduling Framework for Regular Scientific Workflows in Cloud”, International Journal of Applied Engineering Research (IJAER) - Vol. 10, No.82, pp. 267 -271, Dec 2015, Scopus indexed and UGC Approved Journal.