

**SKCET**



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**SRI KRISHNA COLLEGE OF ENGINEERING AND TECHNOLOGY**  
(An Autonomous Institution)

Affiliated to Anna University, Accredited by NAAC with "A" Grade

Accredited by NBA (CSE, ECE, IT, MECH & MCT)

KUNIAMUTHUR, COIMBATORE - 641008.



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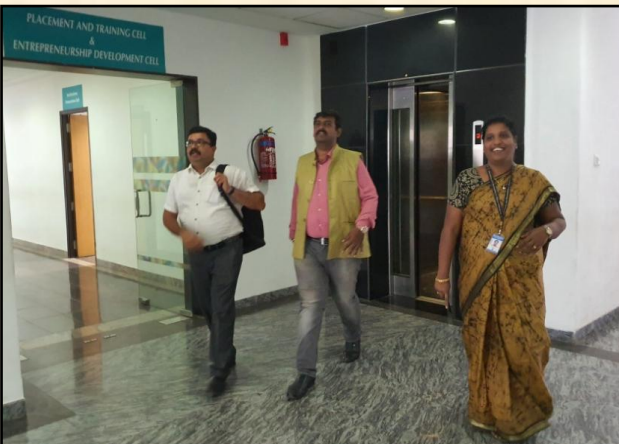
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**SKCET**

**NCSS OFFICIAL CAMPUS VISIT**



**GREETINGS**



राष्ट्रीय साइबर सुरक्षा और सुरक्षा मानकों  
**National Cyber Safety and Security Standards**

SKCET is the prestigious **Resource Centre for National Cyber Defence**. In connection to this Institutional recognition, **Dr.Khalieiraj, Addl.Director General, National Cyber Safety and Security Standards (NCSS)** visited our campus today for a facility monitor and a prolific discussion on the NCSS activities to be implemented. The visit was piloted by **Principal Madam** along with COE and Heads of departments. The focus was on Host Institution responsibilities and deliverables with regard to the conduct of **Indian Cyber Congress (IV edition)**, a National level **summit** to be organised on 20<sup>th</sup> & 21st December 2019 at SKCET.

SKCET

NCSS OFFICIAL CAMPUS VISIT



PRESENTATION



SKCET

NCSS OFFICIAL CAMPUS VISIT

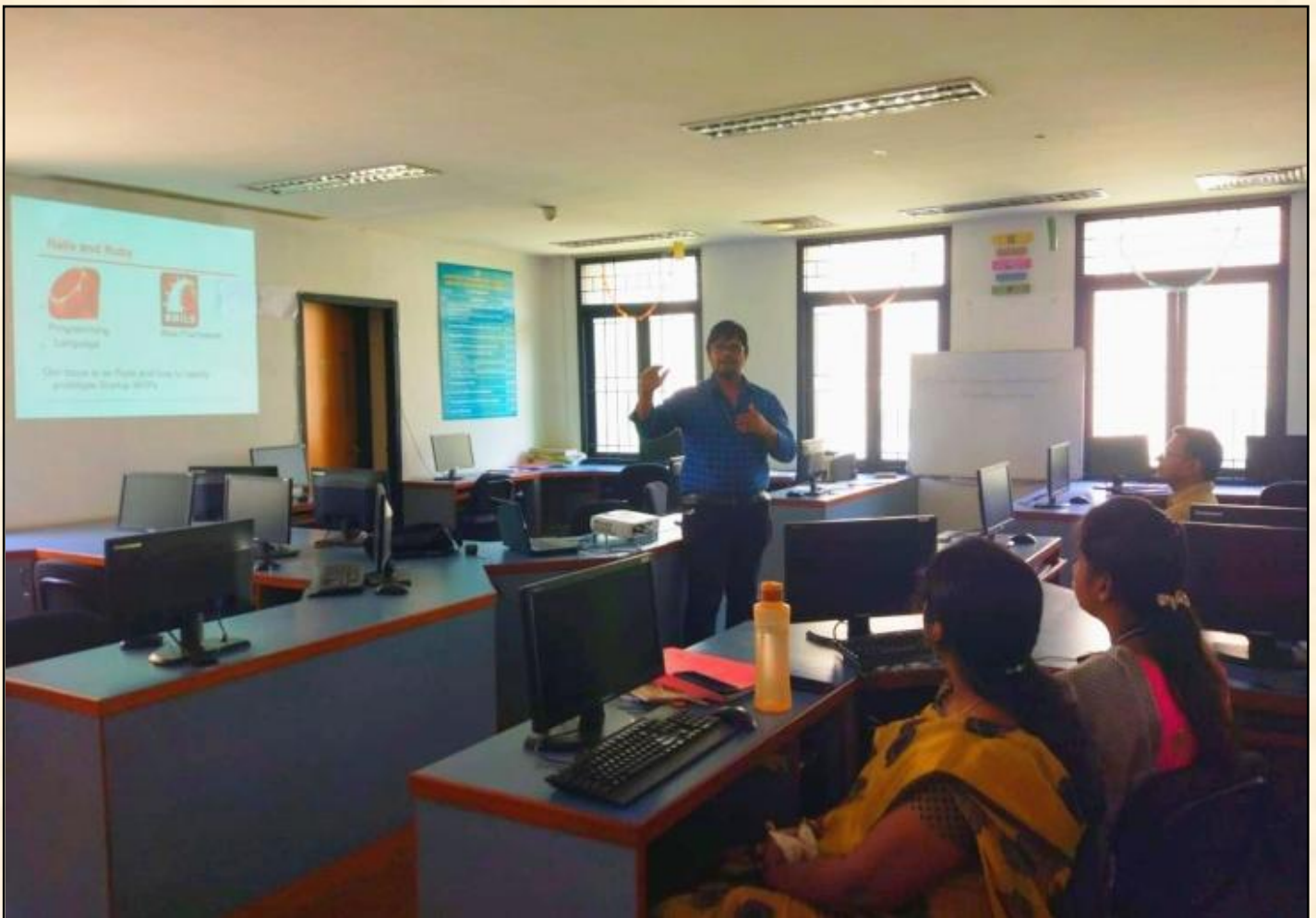


INTERACTION WITH ACADEMIC LEADERSHIP TEAM



## IT

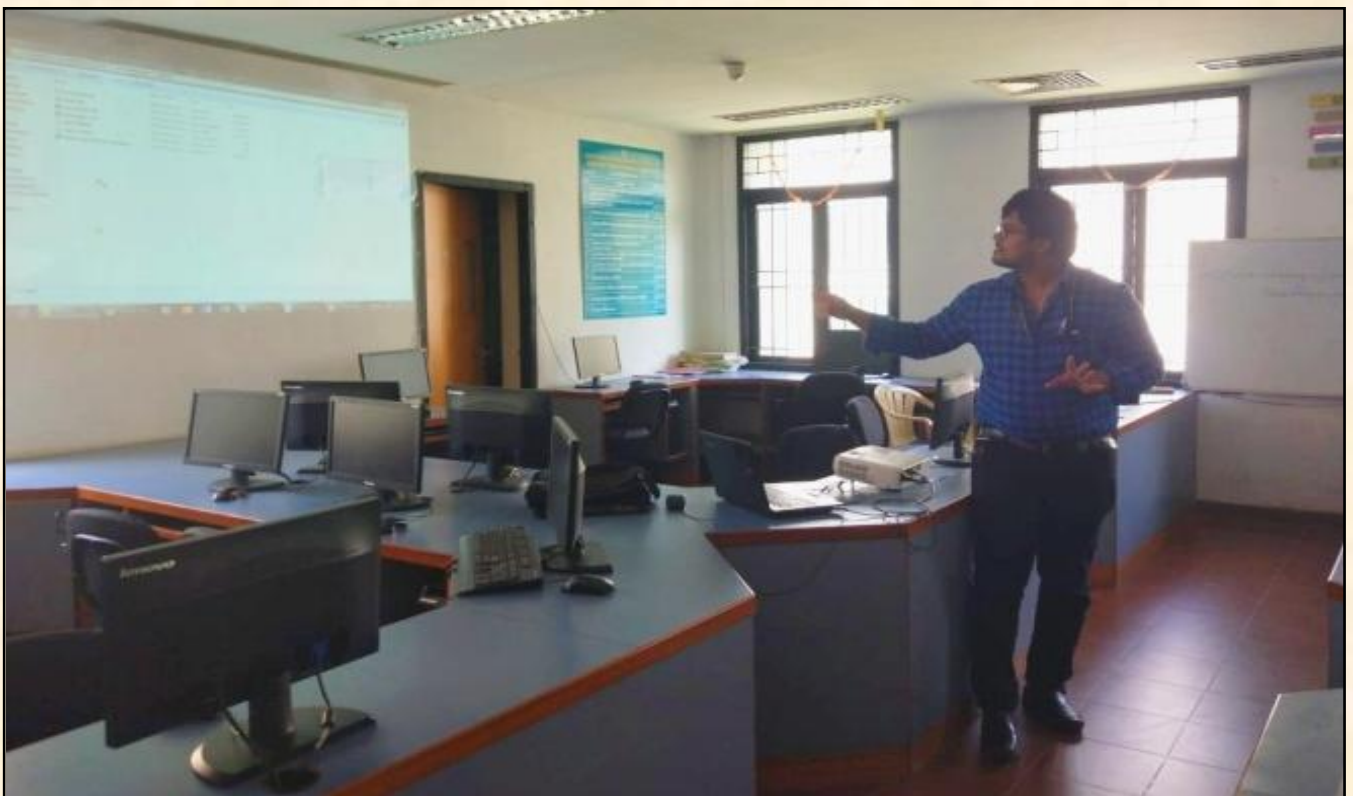
## GUEST LECTURE



**Mr. Syed Muzamil Basha**, Assistant Professor, Department of Information Technology delivered a Guest lecture on **“Ruby on Rails Framework”** to enlighten the faculty members of IT and CSE department. It is a web-application framework that includes everything needed to create database-backed web applications according to the Model-View-Controller (MVC). One of the most powerful ways to quickly develop web applications, Ruby on Rails has a high relevance and demand in today’s marketplace. Companies like Airbnb, Fab.com, Hulu, and Codecademy have built their products using the Rails framework.

IT

GUEST LECTURE



**AFFORESTATION DRIVE**

ECO club conducted Afforestation Drive for the First year students to create awareness on increasing quality planting and promote the planting of diverse tree species. The students collected various medicinal plant species like **Neem, Peepal, Banyan, basil (Tulsi) and Carom (Ajwain)** and planted in the barren land to create a mini forest landscape (Afforestation drive). All the plants and trees replenish surplus oxygen to the campus and thus, add to the **green aura of the campus**.





**GET TO KNOW THE CLUB!**

**TECHNOCRATZ CLUB - IT**

TECHNOCRATZ, the programming club of Department of Information Technology paves way for the students to become an expertise in logical thinking and motivate the students to learn programming with enthusiasm.

*“Programs must be written for people to read, and only incidentally for machines to execute.”*



EEE

FACULTY PARTICIPATION IN IISF



Mr.S.Gobhinath, Department of EEE presented a project titled ‘MUSIKH VAHANA - Making Train a Wild life friendly Vehicle’ on the theme ‘Bio Diversity’ at International Science Festival (IISF) 2019 - Young Scientists Conference being held at Kolkata.

Team Members: Mr.S.Gobhinath, Faculty and R.Ashwin, UG Student.

CSE

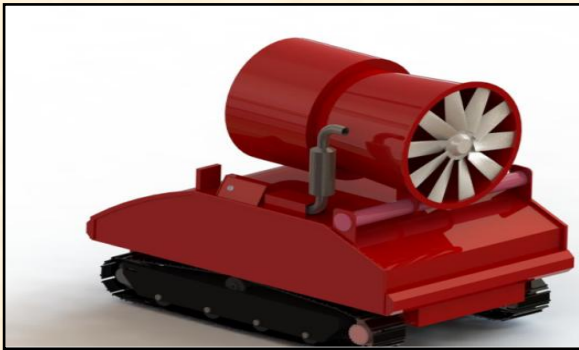
FACULTY MOOC CERTIFICATION



Mr.S.Sureshkumar, Assistant Professor, CSE has successfully completed “Software Architecture” an online non-credit course authorized by University of Alberta offered through Coursera.

**MECH/ EEE**
**F-BOT : PROJECT IN PROGRESS**

Fire Fighting is an extremely dangerous task but still often being carried out by human operators, thus putting human life, invaluable as it is, in a very precarious situation. Therefore, it is highly desirable that the execution of routine and basic fire-fighting tasks to be replaced. This project focuses on an innovative design and implementation of automatic fire detection and fire extinguishing robot.



**PROPOSED  
MODEL  
OF  
F-BOT**

**Novelty:** The pump when placed on-board, sprays water in two forms as a single jet of high intensity and a wide spread long-range mist. The motion of the robot is controlled by a controller module connected with the Wi-Fi module. The controller module on-board evaluates the flame intensity, passes information, and actuates the extinguishing process. When the fire is detected by the sensors, which are interfaced with the controller module, the robot moves to this specific location and extinguishes the fire. The robot is designed in such a way that the fire at a distance of approximately 60 mts is detected and extinguished. This device can greatly reduce damage of both lives and property.



Soft Computing  
<https://doi.org/10.1007/s00500-019-04047-7>

FOCUS



## A novel machine learning approach for software reliability growth modelling with pareto distribution function

D. Sudharson<sup>1</sup> · D. Prabha<sup>2</sup>

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### Abstract

Software reliability is the important quantifiable attribute in gaining reliability by assessing faults at the time of testing in the software products. Time-based software reliability models used to identify the defects in the product, and it is not suitable for dynamic situations. Instead of time, test effort is used in few explorations through effort function and it is not realistic for infinite testing time. Identifying number of defects is essential in software reliability models, and this research work presents a Pareto distribution (PD) to predict the fault distribution of software under homogenous and nonhomogeneous conditions along with artificial neural network (ANN). This methodology enables the parallel evolution of a product through NN models which exhibit estimated Pareto optimality with respect to multiple error measures. The proposed PD-ANN-based SRGM describes types of failure data and also improves the accuracy of parameter estimation more than existing growth models such as homogeneous poison process and two fuzzy time series-based software reliability models. Experimental evidence is presented for general application and the proposed framework by generating solutions for different product and developer indexes.

**Keywords** Software reliability · Artificial neural networks · Pareto distribution · Distribution parameter estimation

### 1 Introduction

In modern society accessing of computers, Internet, electronic equipment by people is accounting into 50% of world's total population approximately calculated through a survey by International Telecommunication Union. Digital inclusion being concerned with need and demands of people while using interactive applications. Backbone of these applications depends on software, and it is essential to provide an application as an errorless module. Software engineering aims to produce reliable software to satisfy the user requirements. It plays a vital role in software

development as the need of quality software model is measurable by its reliability. Software testing is one of the specific phases in developing such application-based software product. Developers are used to identify the bugs through continuous execution under different test cases. Test case (Zhang et al. 2018) and reliability proportional to each other as the reliability increases if the test case increases. But increasing reliability through test cases needs more effort also increases the cost. It is essential to plan before software testing while allocating test case to reduce the developing cost.

Software reliability plays a significant role in many daily life applications, and it is defined as the probability of failure-free operation over a specified time under specified environment. In software development, life cycle failures are introduced by designers, developers, analysts and managers at different phases. User can get to the present and future steadiness through testing the models and also make decisions about the product, regardless the product is released in its present state or require further testing so as to enhance the nature of software. Identifying such errors and fix the bugs, the entire software system is tested so that, the quality of product increases. Figure 1 gives an

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D. Sudharson  
[sudharsondora@gmail.com](mailto:sudharsondora@gmail.com)

D. Prabha  
[prabhadhandayadam@gmail.com](mailto:prabhadhandayadam@gmail.com)

<sup>1</sup> Department of CSE, Hindustan College of Engineering and Technology, Coimbatore, India

<sup>2</sup> Department of CSE, Sri Krishna College of Engineering and Technology, Coimbatore, India

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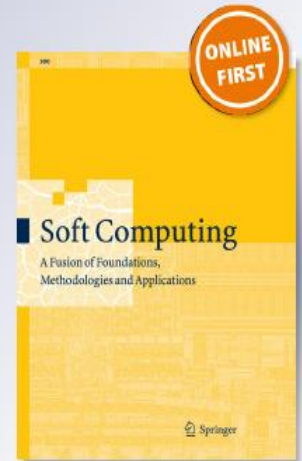
A novel machine learning approach for software reliability growth modelling with pareto distribution function

D. Sudharson & D. Prabha

Soft Computing  
 A Fusion of Foundations,  
 Methodologies and Applications

ISSN 1432-7643

Soft Comput  
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❖ Dr. D. Prabha, Professor, Department of Computer Science and Engineering has published a research article titled "Deep neural network: Recognize data management of Artificial Intelligence in retail" in Springer-Soft Computing. It is SCI and Scopus indexed with impact factor of 2.784.

R&D

JOURNAL PUBLICATION - CSE

Indian Journal of Natural Sciences



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RESEARCH ARTICLE

Cost and Effort Estimation in the Early Stage Assessment of Object Oriented Software

Latha Maheswari T<sup>1\*</sup>, Manikandan M<sup>2</sup> and Duraisamy S<sup>3</sup>

<sup>1</sup>Assistant Professor, Computer Science and Engineering, Sri Krishna College of Engineering and Technology, Coimbatore - 641 008, TamilNadu, India

<sup>2</sup>Professor, Computer Applications Department, Kumaraguru College of Technology, Coimbatore, TamilNadu India

<sup>3</sup>Professor, Computer Science Department, Chikkana Government Arts College, Tirupur, TamilNadu, India.

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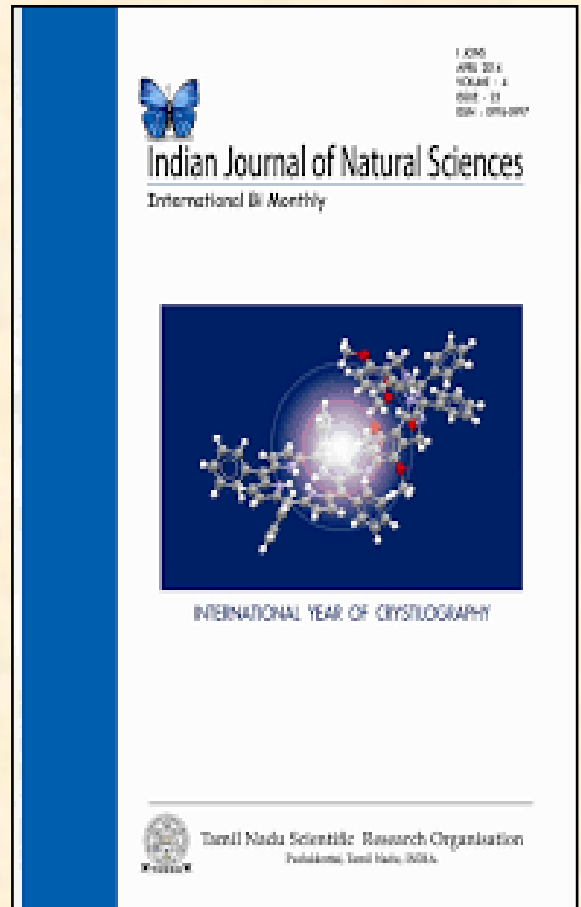
\*Address for Correspondence

Latha Maheswari T,  
Assistant Professor,  
Computer Science and Engineering,  
Sri Krishna College of Engineering and Technology,  
Coimbatore - 641 008, TamilNadu, India.  
Email: lathasarvesh@gmail.com

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ABSTRACT

The most demanding activities in software development organizations are software quality and cost estimation Software companies are alert on minimizing software error, producing good quality software products within the estimated budget. Currently, the researchers are focusing on to predict the software development effort and cost. Predicting the software cost prior to beginning any software development is essential for the project managers and the key stakeholders. Major project target such as project schedules, budgeting, resource allocation, and project delivery dates are set on the effort and cost estimates. Thus, the reliability of the estimation is the desirable factor to find the success or failure rate of the project. The main aim is to work with early stage improvement while taking the decision in the design phase. Basically, size and cost is a deliberate element of the software project so, based on the size and other functionalities, the software manager estimate the total effort required to develop the project. From the effort and work schedule, the total cost can be estimated. This will retain the relations between the developer and the customer. In this paper, the proposed model implements the technique using java tool.



❖ Dr.T. Latha Maheswari, of Department of Computer Science and Engineering has published a research article titled "Cost and Effort Estimation in the Early stage Assessment of Object Oriented Software" in the **Indian Journal of Natural Sciences** .

**R&D**

**JOURNAL PUBLICATION - MCT**

❖ Mr.Vishnuvardhan.R of Mechatronics Engineering has published a paper titled “Data set on optimization of ethyl ester production from sapota seed oil” in the Elsevier-Journal of Data in brief. It is SCI and Scopus Indexed with an Impact factor of 1.2.

Data in brief 25 (2019) 104388

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Contents lists available at ScienceDirect

**Data in brief**

journal homepage: [www.elsevier.com/locate/dib](http://www.elsevier.com/locate/dib)

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Data Article

## Data set on optimization of ethyl ester production from sapota seed oil

R. Sathish Kumar <sup>a,\*</sup>, S. Sivakumar <sup>b</sup>, A. Joshuva <sup>b</sup>,  
G. Deenadayalan <sup>b</sup>, R. Vishnuvardhan <sup>c</sup>

<sup>a</sup> Department of Automobile Engineering, Hindustan Institute of Technology and Science, Chennai, 603103, Tamil Nadu, India

<sup>b</sup> Department of Mechanical Engineering, Hindustan Institute of Technology and Science, Chennai, 603103, Tamil Nadu, India

<sup>c</sup> Department of Mechatronics Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, 641008, Tamil Nadu, India

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Optimization  
Ethanolysis  
Ethyl ester  
Transesterification

**ABSTRACT**

This article presents the data set of experimental investigation on extraction, characterization, and optimization of ethyl ester yield from sapota seed oil. The seeds were collected, dried and shells were removed. Oil was extracted by mini wooden cold press oil extraction machine and found 26% oil content. The raw oil was characterized, fatty acid contents and physicochemical properties were estimated. The ethyl ester yield was optimized using full factorial experimental design. Three key factors were selected with three levels each. 27 experiments were conducted with three trials of each experiment. The physicochemical properties of the sapota seed oil ethyl ester were determined based on the ASTM standards and data was also presented in this data article.

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# Journal Data in Brief

❖ **Dr. K.C.Ramya and Dr. S.Sheeba Rani of Electrical and Electronics Engineering Department** have published a paper titled “Improved grey wolf optimization-based feature subset selection with fuzzy neural classifier for financial crisis prediction” in **Springer- Soft Computing**. It is **SCI and Scopus Indexed** with an **impact factor of 2.784**.

Soft Computing  
<https://doi.org/10.1007/s00500-019-04323-6>

FOCUS 

### Improved grey wolf optimization-based feature subset selection with fuzzy neural classifier for financial crisis prediction

Shweta Sankhwar<sup>1</sup> · Deepak Gupta<sup>2</sup> · K. C. Ramya<sup>3</sup> · S. Sheeba Rani<sup>3</sup> · K. Shankar<sup>4</sup> · S. K. Lakshmanaprabu<sup>5</sup> 

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**Abstract**  
 In present days, prediction of financial crisis of a company is a hot research area. The use of data mining and machine learning algorithms assists to resolve the financial crisis prediction (FCP) problem. Since financial data contain more demographical and unwanted information, it might decrease the classification performance significantly. So, feature selection (FS) process is applied to choose useful data and remove the irrelevant repetitive data. This paper introduces a novel predictive framework for FCP model by the incorporation of improved grey wolf optimization (IGWO) and fuzzy neural classifier (FNC). An IGWO algorithm is derived by the integration of GWO algorithm and tumbling effect. The presented IGWO-based FS method is employed to discover the optimal features from the financial data. For classification purposes, FNC is employed. The proposed method is experimented on two benchmark data sets, namely Australian Credit and German data set under several of performance metrics. The experimental values verified the superior nature of the proposed FCP model over the compared methods.

**Keywords** Financial crisis prediction · Feature selection · Fuzzy neural classifier · Grey wolf optimization





# HALL OF FAME

THE NEWSLETTER FOR EXCELLENCE IN TECHNOLOGY AT MICROSOFT

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JULY 2019, ISSUE 7

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**HE'S NOT BIG, BUT AN X-FACTOR**

WRITTEN BY BARTHOLOMEW HENDERSON

If code is poetry, Gowtham is our resident poet. With an appetite for code, a thirst for Green tea and an uncanny ability to watch cricket in the middle of a conversation, Gowtham brings a whole lot of flexibility into any team he joins. When he isn't busy writing algorithms in real life, he plays cricket. Despite getting easily riled up over the social, political and cricketing issues in India, he maintains a Zen-like calm and humbleness around him.

As stand by the quote "Every legend was once a beginner" This man makes miracles in AI space. A project worth a billion on "Leverage of AI in quantum computing to restructure blockchain platforms Using Adaptive Learning Schema". The project aims on blockchain platforms to leverage its potential by using power of various supervised and unsupervised machine learning algorithms and optimize it on real time.

GOWTHAMKUMAR, K,  
RESEARCH SCIENTIST - I,  
MICROSOFT LABS, INDIA.

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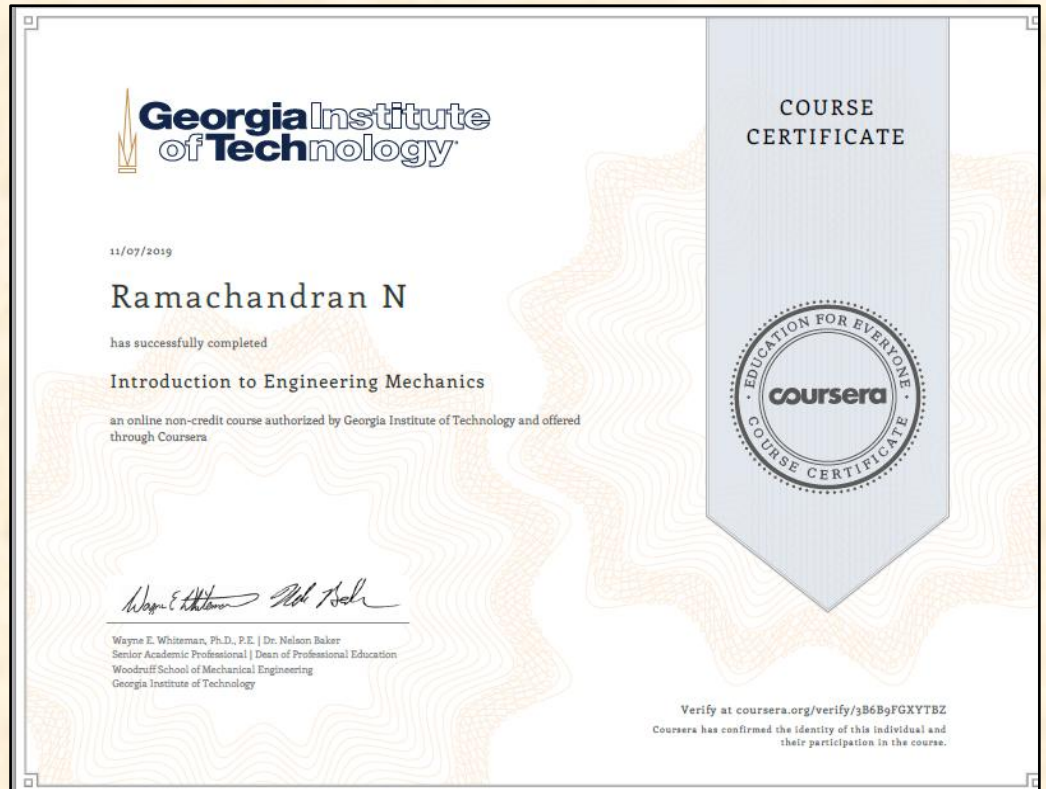


Mr. Gowthamkumar. K, Alumni of 2015 - 2017 batch is working at Microsoft Labs, India as Research Scientist – I. His project aims on block chain platforms to leverage its potential by using power of various supervised and unsupervised machine learning algorithms and optimize it on real time. His noteworthy project performance has fetched him appreciation and has been showcased in his company newsletter 'Hall of Fame' for his excellence in Technology at Microsoft.

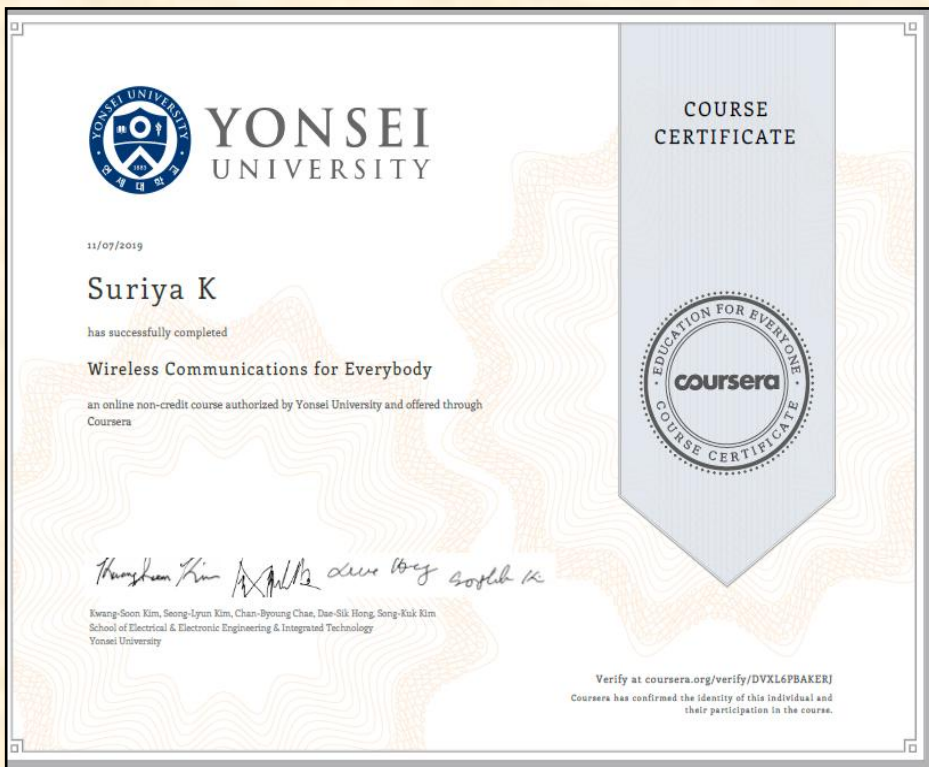


**MECH / ECE**

**FACULTY MOOC CERTIFICATION**



**Mr.N.Ramachandran** from Mechanical Department has successfully completed the online course(COURSERA) on the topic” **Introduction to Engineering Mechanics**”.



**Ms.K.Suriya**, Assistant Professor, ECE has successfully completed an online certification course on **“Wireless Communications for Everybody”** with 95%. It is a 6 week course, offered by **Coursera** authorized by **YONSEI University**.

ART BUZZ

COLOUR SKETCH



**Pavithra M**  
**Third Year ECE - B**

**SKCET**

**IN MEDIA**



கோவை ஸ்ரீ கிருஷ்ணா கல்வி குழுமத்தில் சர்தார் வல்லபாய் படேல் பிறந்த தினம் தேசிய ஒற்றுமை தினமாக அனுசரிக்கப்பட்டது. இதில், கல்வி குழுமங்களின் நிர்வாக அறங்காவலர் எஸ்.மலர்விழி, முதன்மை நிர்வாக அதிகாரி சுந்தரராமன், முதல்வர்கள் ஜேனட், பேபி ஷகிலா, சீனிவாசன் ஆளவந்தார், பன்சால் ராஜ்குமார், பழனியம்மாள், பேராசிரியர்கள் மற்றும் மாணவ, மாணவியர்கள் கலந்து கொண்டு ஒருமைப்பாட்டு உறுதிமொழி எடுத்தனர்.

“Manpower without unity is not a strength unless it is harmonized and united properly, then it becomes a spiritual power.”

-SARDAR VALLABHBHAI PATEL

**RASHTRIYA EKTA DIWAS**

(National Unity Day)  
31<sup>st</sup> October



கோவை ஸ்ரீ கிருஷ்ணா கல்வி குழுமத்தில் சர்தார் வல்லபாய் படேல் பிறந்த தினம் தேசிய ஒற்றுமை தினமாக அனுசரிக்கப்பட்டது. இதில், கல்வி குழுமங்களின் நிர்வாக அறங்காவலர் எஸ்.மலர்விழி, முதன்மை நிர்வாக அதிகாரி சுந்தரராமன், முதல்வர்கள் ஜேனட், பேபி ஷகிலா, சீனிவாசன் ஆளவந்தார், பன்சால் ராஜ்குமார், பழனியம்மாள், பேராசிரியர்கள் மற்றும் மாணவ, மாணவியர்கள் கலந்து கொண்டு ஒருமைப்பாட்டு உறுதிமொழி எடுத்தனர்.

**தீன மலர்**  
உண்மையின் உரைகல்

## Village kids learn about Green Diwali through SKCET



*The students and faculty of Sri Krishna College of Engineering and Technology celebrating Green Diwali with tribal school children and people at Panapalli near Anaikatti.*

### The Covai Mail

The Civil Engineering students of Sri Krishna College of Engineering and Technology joined with the college's Social Club 'Eagai', Eco Green Club 'Manvaasam' & CESA Studio and Inaintha Karangal NGO to celebrate 'Green Diwali' among the tribal school children and people at Panapalli near Anaikatti. The event was held

in an eco-friendly manner.

About 50 students and faculties conducted various events, such as Green Diwali, Awareness on Rain Water Harvesting, Air Pollution, Plastic Pollution, Tree Plantation Drive, Games for Teachers and Students, Tribal Dance, etc.

The event witnessed the celebration without firing crackers. The public were

asked by the team to avoid crackers for the sake of environment protection and safeguarding birds.

Nearly 30 students from 1st to 5th grade of Government Primary School, Panapalli participated in various events conducted at Panapalli Village. Prizes were distributed for the winners of each event and lunch was also provided for the students.

