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Optimized Energy Aware Routing Based on Suitable Based Antlion Group with Advanced Algorithm (SA-AOA) in Wireless Sensor Network

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A Heuristic and ANN based Classification Model for Early Screening of Cervical Cancer

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An Electric Eye for Human Activity Recognition: A Hybrid Neural Network



Abinaya Preethi

2020, International Journal of Engineering and Advanced Technology

A real time detection of human movements is a practical solution to monitor aged people mentally challenged people with the permission of their family. Household person is monitor the elder and differently abled people. Instead of monitoring their activities with other people, smart phones are used as a remote to monitor their activities and sir

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Abstract

This paper proposes a co-ordinated reactive power control strategy analysis in Line Side Converter (LSC) of Doubly Fed induction generator (DFIG) and in the Automatic voltage regulator (AVR) of synchronous generator (SG) in isolated Dish Stirling solar Thermal(DSTS) – Biomass hybrid power system. This co-ordinated control strategy greatly maintains the autonomous hybrid power system voltage deviation by adjusting the reactive power imbalance caused due to the impulsive reactive power nature of DFIG coupled with the DSTS and load. Gain values of Integral Order Proportional Integral (IO-PI) controller in LSC and AVR are optimized to maintain the system voltage stability. Modern and simple Grey wolf optimization algorithm has been used to extract the superior PI gain values to maintain system stability with less reaction time. The proposed co-ordinated control strategy has been tested with various load disturbance and with dynamic input power feed from DSTS to validate the system robustness. Also, the optimized gain value based voltage deviation values are validated in real time with dSPACE.



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AWARENESS OF FINANCIAL SERVICES TOWARDS SOCIO ECONOMIC FACTORS IN RURAL AREAS

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ABSTRACT

Universal access to financial services is a key ingredient for achieving socioeconomic development. Financial inclusion theme is particularly relevant for India, where around 21% of the world's unbanked population resides. Recently, India has taken several steps towards financial inclusion for achieving faster inclusive growth. This paper analyzes the significance of socio-economic factors of the respondents towards awareness of financial services among 150 respondents belonging to rural households of Coimbatore district. It is an ongoing exercise that blends the government's vision with concerted efforts by public and private players and policymakers. Financial inclusion is a key element in the strategy to achieve inclusive development of a nation. Providing access to financial services is becoming a neighborhood of concern for the policymakers because it has far reaching economic and social implications. Financial inclusion is a key element in the strategy to achieve inclusive development of a nation. Financial inclusion is required to uplift the poor and disadvantaged people by providing them the customized financial products and services.

Keywords: *Financial Service, Financial Inclusion and Rural Households.*

Introduction

Starting with the nationalization of banks, priority sector lending requirements for banks, agent bank scheme, establishment of regional rural banks (RRBs), place approach, self-help group-bank linkage programme, etc., multiple steps have been taken by the Reserve Bank of India over the years to increase access to the poorer segments of society And efforts to include the financial services used by all segments of society. India's financial inclusion drive is not just a one-time effort to ensure better banking services or a wider reach.

Inclusive growth' has been a priority of the Government over the past decade , with the main objective of the growth of the economy, where all sections participate in the growth process and benefit out of it. Access to finance or financial inclusion plays a crucial role in this direction, which is imperative for achieving the equity objective and to sustain the growth momentum of the economy.

According to World Bank Report, "Financial Inclusion is an absence of price and non-price barriers in the use of financial services". The roles of banks either formal or informal cannot be over emphasized in that they perform intermediate functions between savers and those in need of credits. The formal financial system also shows higher poverty ratios and higher inequality. Thus, financial inclusion is no longer a policy choice today but a policy

compulsion. And, banking is a key driver for financial inclusion/inclusive growth. Reserve Bank of India has proposed that financial inclusion is a cornerstone of developing economy and it also aimed for providing access to formal financial services in an affordable manner to reduce poverty and create jobs. India now needs a multidimensional approach which existing digital platforms, infrastructure, human resources and policy frameworks to be strengthened to promote financial literacy among customers. (RBI report 2020)

OBJECTIVE OF THE STUDY

- To analyze the significance of socio-economic profile of the respondents towards awareness of financial services

REVIEW OF LITERATURE

Rao (2020) examined that India should take more efforts to expand access to organized financial systems through digital payments and there is a need to increase financial and digital knowledge among the people. RBI's policy to promote digital inclusion, making online remittances through National Electronic Funds Transfer (NEFT) and Real Time Gross Settlement System (RTGS) facilities in savings bank accounts free from the indeed significant. While the global recognition of India's policy thrust for pursuing FI through digital approach is encouraging, tackling inoperative accounts and deepening for the wellbeing of the society.

Farzana (2018) examined that Digital financial services have significant potential to provide a range of affordable, convenient and secure banking services to poor people in developing countries. The digital India initiative can easily connect the different groups of society and can help to achieve the objective of financial inclusion through digital banking. Adopting digitization in financial services and including most of population in the net of banking will help in growth and development of country.

Borsa Istanbul (2018) the study found that digital finance through Fintech providers has positive effects for financial inclusion in emerging and advanced economies, and therefore the convenience that digital finance provides to individuals.

Finca (2018) examined the role of financial services in closing the gender gap. The study found that around two billion people do not have access to financial services in which more than one billion of them are women. Financial access is a key way that social performance task force measures goals and impact, access creates greater stress for many women because they don't have the opportunity to make financial decisions in their households.

Methodology

A sample size of 150 respondents was selected using stratified sampling is a type of non-profitability which involves the sample being drawn from the part of the population which is close to the hand. The study was conducted among the rural people in Coimbatore district. ANOVA is done to analyze the significance of socio economic factors of the respondents on awareness towards financial services. (Coimbatore south region, November 2016).

Table 1: Awareness of Financial Services Towards Socio Economic Factors in Rural Areas

Socio-economic factors	Sum of Squares	Df	P value
Status of employment	3.694	38	.000
Total	73.307	150	
Nature of work	5.462	25	.002
Total	105.459	150	
Type of Income	2.276	9	.000
Total	73.307	150	
Monthly income	5.462	10	.000
Total	99.997	150	
Number of adults in your household	3.248	6	
Total	73.307	150	.024
Literate	.938	100	
Total	73.307	150	
Period of Saving	.932	15	.034
Total	73.307	150	
Own a piece of land	.063	7	.638
Total	73.307	150	

(Source: Primary Data)

Results and Discussions

It is found that current status of employment, nature of work, type of income earned monthly income of the family, number of adults in the family, literacy and period of saving of the respondents significantly influences the awareness of financial services. It's also found that ownership of a land of the respondents does not influence the awareness level of financial services. The study found that all the socio economic factors of the respondents except ownership of land have significant influence on the awareness level of financial services..Tabitha Durai (2019) analyzed in his study that Digital finance provides a greater control of customer personal finance, quick financial decision making, and the ability to make and receive payments. And also states that digital financial services are often more convenient and affordable than traditional banking services, enabling low-income and poor people in developing countries to save lots of and borrow within the formal economic system , earn a financial return and smooth their consumption

Except the factor own a piece of land, the other factors like current status of employment, nature of work, type of income earned, monthly income earned, number of adults, literacy and savings were the factors which influence the awareness of financial services.

Financial services aim unbanked individuals to gain access to financial inclusion of unbanked people to be banked. India has witnessed rapid growth in mobile adoption and today more than 70 per cent of the population owns a mobile phone. The banking sector has made rapid strides largely because of the swift advancement in technology.RBI has been actively involved in harnessing technology for the develop-ment of the Indian banking sector over the years.

The apex bank took upon the task of promoting computerization in banking to improve customer services, book keeping and management infor-mation system (MIS) to enhance pro-ductivity. RBI has played a pivotal role in achieving various objectives like implementation of the electronic payment system like RTGS (Real Time Gross Settlement), electronic funds transfer (NEFT), mobile banking system. Financial inclusion status is more likely to enhance through technological interventions. Unbanked economies have tapped the potential of digital technology,

particularly within the mobile space, to measure the impact of technology-driven inclusion. Here the study found that all socio economic factors significantly influence the awareness of the financial services

CONCLUSION

The demand side of financial inclusion is education which includes skill development and health, irrigation, power, roads, transport, marketing arrangements etc., supply side financial inclusion includes availability of timely finance at affordable rate of interest. The financial literacy and awareness among the marginalized sector of people are absolutely necessary to achieve financial inclusion. Financial Inclusion is an essential part which can be achieved through creating awareness about the income, education and savings among the customers. Any Economic Development growth can said to be success, by the most of the people and also bringing the serious change in the people's attitude on different social aspects. India, it is very diverse in almost all senses, it becomes all the more important to maintain equilibrium between various socio-economic-political dimensions and efforts should be made to bridge the gaps existing today. Financial inclusion promotes the culture of saving, improves access to credit both entrepreneurial and personal emergency and also enables efficient payment mechanism.

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IMPACTS OF CORONAVIRUS ON THE INDIAN ECONOMY

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ABSTRACT:

The COVID-19 pandemic in India is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The lockdown and the downturn in economic activity has hit all in the world hard. The COVID-19 spread disrupted the status quo activities in Indian states — the immediate effect created chaos among people and states to develop strategies accordingly. Covid 19 impact on India's economy to shrink by 3.2% in FY 21. Estimated cost of full lockdown was 26bn USD. Global economic output to contract by 3% due to coronavirus pandemic. Prime Minister Modi announced an economic package of ₹20 trillion (US\$280 billion) for 'Atma Nirbhar Bharat' (self reliant India). The economic package is nearly 10% of the GDP. Govt. aid as May 6 2020 was 348 bn INR lending institutions to extend the moratorium on term loan instalments by another three months, i.e., from June 1, 2020 to August 31, 2020. The Indian economy has started showing signs of normalcy with ease in lockdown restrictions across the country. April was the worst month, things had slightly improved in May, while the recovery started from June. Five Indian states contributing nearly 27% of the country's gross domestic product are leading a recovery in the economy as it slowly emerges from the world's biggest lockdown,

Keywords: Covid, Lockdown, GDP, Unemployment, Moratorium, RBI

The COVID-19 pandemic in India is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case of COVID-19 in India, which originated from China, was reported on 30 January 2020. As of 17 July 2020, the Ministry of Health and Family Welfare (MoHFW) has confirmed Active of 3, 42,473 cases, 635756 recoveries (including 1 migration) and 25,602 deaths in the country. India currently has the largest number of confirmed cases in Asia, and has the third highest number of confirmed cases in the world after the United States and Brazil with the number of total confirmed cases breaching the 100,000 mark on 19 May and 200,000 on 3 June. India's case fatality rate is relatively lower at 2.80%, against the global 4.7%, as of 6 July. Six cities account for around half of all reported cases in the country – Mumbai, Delhi, Ahmedabad, Chennai, Pune and Kolkata. As of 24 May 2020, Lakshadweep is the only region which has not reported a case. On 10 June, India's recoveries exceeded

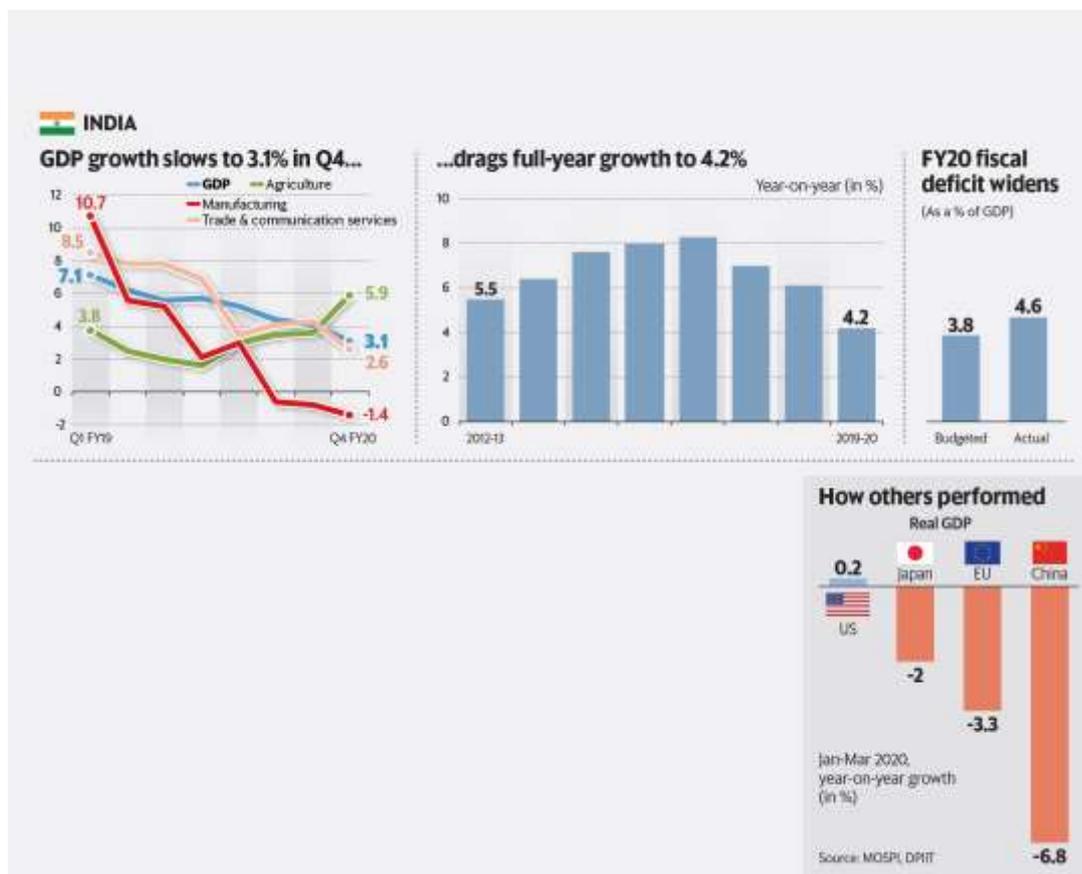
active cases for the first time reducing 49% of total infections followed by recovery rate crossing 60% till early July. Although, active have continued to increase persistently.

The lockdown and the downturn in economic activity has hit all in the world hard. The coronavirus pandemic, which was first detected in china, has infected people in 188 countries Relief to all households, Industrial sector, Manufacturing sectors etc., deprived suddenly of livelihoods and incomes has been difficult to deliver, with major gaps in coverage as well as in nourishment. Uncertainty of what is permitted under lockdown, lack of clarity as administrative guidelines are fine-tuned and genuine fear of infection, have all contributed to slowing down the pace of the rural economy. The disruption of value chains that are crucial to enable market access to Agriculture products and poultry, fish produce has been staggering for small and marginal farmers, agricultural labourers and fisher-folk. Access to markets has become a major safety issue as well, as some wholesale and retail markets to which supply their perishable products to take their produce are potential centres of infection. If local supply chains have to benefit small producers, they also have to be sanitised and safe.

The COVID-19 spread disrupted the status quo activities in Indian states — the immediate effect created chaos among people and states to develop strategies accordingly. But, a country like India which composed mainly of workforces in the organized and unorganized sector implicated generous concerns over the rural half of the country urban as well. On 24th March 2020, Indian Prime Minister Narendra Modi announced a nationwide lockdown and extended subsequently. The decision was a 'necessary evil' which inflicted on the daily wage earners and farmers across the country.

Initially during the lockdown period the common people like rural mass, daily earners had undergone untold misery and suffered a lot even without proper food to eat. The migrant labours throughout the country had taken extreme steps to move on to their native places by walking 100's of miles with their families in spite of warning from the government. By early to mid-March, the government had drawn up plans to deal with a worsening of the pandemic in the country. The Nationwide lockdown was imposed on March 24 and it extended till May 31. Prime Minister Modi announced an economic package of ₹20 trillion (US\$280 billion) for 'Atma Nirbhar Bharat' (self reliant India). The economic package is nearly 10% of the GDP. Govt. aid as May 6 2020 was 348 bn INR .He added that Special economic package was for labourers, farmers, honest tax payers, MSMEs and cottage industries. Mr.Modi added that the five main pillars India stands on are – economy, infrastructure, governing systems, vibrant democracy and supply chain.

India's gross domestic product (GDP) grew 3.1 per cent in January-March reflecting the partial impact of the COVID-19 lockdown on the manufacturing and services sectors. That was much better than economists' estimates, but still lower than 4.1 per cent in the previous quarter. The annual expansion in the GDP stood at 4.2 per cent in fiscal year 2019-20 - the lowest pace of growth in 11 years, as against a previously projected 5 per cent. The official rate of GDP expansion comes days after the country entered a third month of lockdown with few exceptions to curb the spread of the coronavirus pandemic, which has hampered an already-slowng economy and forced many businesses to trim their operations leading to thousands of job losses. Covid 19 impact on India`s economy to shrink by 3.2% in FY 21, World Bank sharply scaled down its projections for India`s economy forecasting 3.2% in the fiscal year 2020-21 because of the covid induced lockdown .Earlier it had predicted 1.5-2.8% growth. Impact on GDP growth from April to June 2020 was -9.3% and estimated cost of full lockdown was 26bn USD.



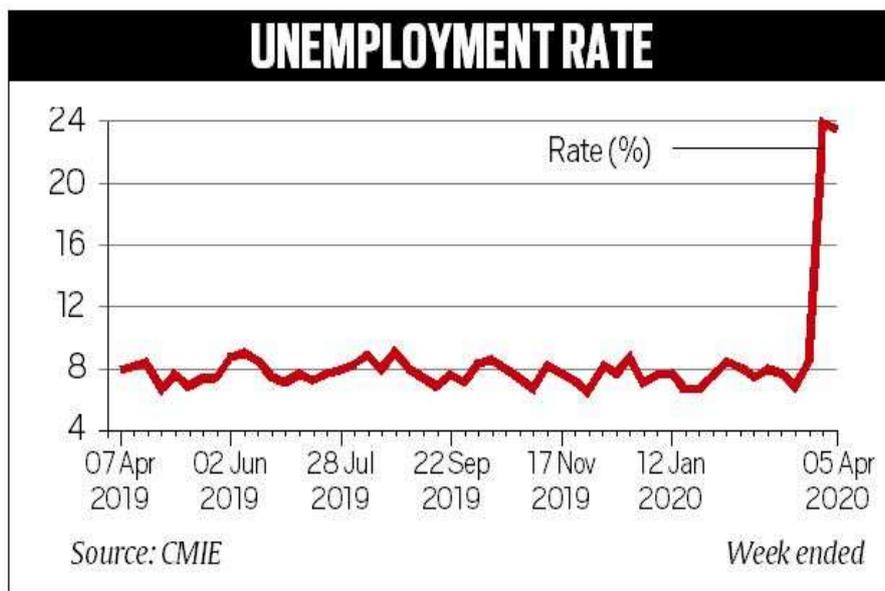
Global economic output to contract by 3% due to coronavirus pandemic. The COVID-19 pandemic is having a “severe” effect on the world economy and is expected to cause a -3% change (i.e., a contraction) in global output in 2020, “much worse” than the 2008-09 financial crises, as per the International Monetary Fund’s (IMF) World Economic Outlook (WEO). India’s growth is expected to dip to 1.9% in 2020 and rebound to 7.4% in 2021, as per the WEO. India’s growth projection for 2020 is 3.9% less than what was projected for the country in the January update to the WEO while its rebound in 2021 is 0.9 % higher than the January projection (for India, forecasts on a fiscal year basis). World growth rates have been revised downwards by more than 6 percentage. Economies such as the US, Japan, the UK, Germany, France, Italy and Spain are expected to contract this year by 5.9, 5.2, 6.5, 7, 7.2, 9.1 and 8 per cent respectively. Advanced economies have been hit harder, and together they are expected to grow by -6 per cent in 2020. Emerging markets and developing economies are expected to contract by -1 per cent. If China is excluded from this pool of countries, the growth rate for 2020 is expected to be -2.2 per cent.

Covid 19 pandemic perhaps represents so for the biggest test of robustness and resilience of our economic and financial system. The Reserve Bank of India (RBI) has cut the repo rate by 135 basis points since February 2019 till the onset of COVID-19. The RBI Governor said that repo rate was cut overall by 250 basis points since February 2019 to alleviate liquidity stress and provide financial stability in the economy. The main aim behind the move was to tackle the slowdown in economic growth. Das added that such measures would have positively impacted the economic activity in the country but the coronavirus crisis followed. Das stated that they had elaborately touched upon issues concerning economic growth during the meeting of the Monetary Policy Committee (MPC). The MPC has decided to cumulatively, cut the policy repo rate by 115 basis points.

Data from the Reserve Bank of India showed consumer confidence collapsed last month. The current situation index and the future expectations index were both below 100, indicating that consumers were pessimistic. Consumer perception on the general economic situation, employment scenario and household income plunged deeper into contraction zone the RBI said in its release. “While expectations on general economic situation and employment scenario for the year ahead were also pessimistic.” Millions of people in India lost their jobs due to the lockdown. Experts said that would disproportionately affect daily wage earners and low-income households.

Industries severely affected were Construction, Finance, Real estate, Professional services, Telecom. According to the MRD report there is a job loss of 40 million people in the country mostly in the unorganized

sector, which provides more job opportunities. Millions of people in India lost their jobs due to the lockdown. Experts said that would disproportionately affect daily wage earners and low-income households. Information compiled by the Centre for Monitoring Indian Economy showed that the unemployment rate in both rural and urban areas rose sharply in late March. It remained relatively high in April, before showing signs of improvement starting in May when some activities resumed. CMIE said unemployment is “witnessing a very rapid fall” in June, accompanied by an increase in the labour force participation rate. India’s economy is ailing from more than covid-19. Stringent restrictions halted most economic activities and caused millions of people, many of them daily wage earners, to lose their jobs and revenue streams. The informal industry in cities being badly affected has resulted in loss of rural income. What’s more, massive layoffs and lack of relief measures are pushing migrants to return to their villages, which would increase the risk of the spread of the virus.



Investment bank Goldman Sachs last month predicted a massive 45% economic decline in the three months between April to June. Ratings agency Moody’s slashed India’s credit ratings to the lowest investment grade level. Alarming fact is that Indian economic growth rate would be in negative and the economy would shrink 5% to 12%. So that unemployment arises with loss of income there by creating decrease in demand. Covid had caused two types of damage to the economy one with Demand contraction that will lead to negative growth and supply to be stagnant. It can be overcome by measures taken by the government as they already created the ways and mean but to the demand it is in vain.

In view of the extension of the lockdown and continuing disruptions on account of COVID-19, it has been decided to permit lending institutions to extend the moratorium on term loan instalments by another three months, i.e., from June 1, 2020 to August 31, 2020. It may be a current relief but the borrowers should remember that moratorium is not the waiver of the loan, it is only a grace period. Experts have voiced that if borrowers accept and enjoy moratorium announced now they have to repay more than the amount what actually fixed as repayment originally. People have been cautious about increasing their liabilities by opting for the moratorium, especially in retail, Agriculture and MSME sectors. The country will now face multiple challenges in terms of financial crises, health crises, collapse in commodity prices and much more. The banking system has increased the surplus liquidity because of the demand-side shocks that arises due to uncertainties as well as lock down in the market. There is a huge impact on the financial shock that includes stock market crash, liquidity crises as it began to drain out from global market in banking system and various changes in monetary policies. The country’s banking and financial system is capable of rising to the occasion in meeting this challenge. Banks will also have to raise capital in an anticipatory basis instead of waiting for a situation to arise. The economic impact of the pandemic due to the lockdown and anticipated post lockdown compression in economic growth may result in higher NPA and capital erosion of the banks. A recapitalization plan for public and private sector banks has therefore become absolutely necessary.

RESULT OF REVIVAL ECONOMY:

The Indian economy has started showing signs of normalcy with ease in lockdown restrictions across the country. April was the worst month, things had slightly improved in May, while the recovery started from June. Five Indian states contributing nearly 27% of the country's gross domestic product are leading a recovery in the economy as it slowly emerges from the world's biggest lockdown, a study by Elara Securities Inc. Kerala, Punjab, Tamil Nadu, Haryana and Karnataka have seen a pickup in activity, based on an analysis of indicators such as power consumption, traffic movement, arrival of farm products at wholesale markets and Google mobility data. Punjab and Haryana were among states that saw an improvement in electricity requirement, reflecting demand from farm operations. National capital Delhi also showed an increase in power demand as well as mobility trends.

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Monarch Butterfly Optimization for Reliable Scheduling in Cloud

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Abstract: Enterprises have extensively taken on cloud computing environment since it provides on-demand virtualized cloud application resources. The scheduling of the cloud tasks is a well-recognized NP-hard problem. The Task scheduling problem is convoluted while convincing different objectives, which are dispute in nature. In this paper, Multi-Objective Improved Monarch Butterfly Optimization (MOIMBO) algorithm is applied to solve multi-objective task scheduling problems in the cloud in preparation for Pareto optimal solutions. Three different dispute objectives, such as makespan, reliability, and resource utilization, are deliberated for task scheduling problems. The Epsilon-fuzzy dominance sort method is utilized in the multi-objective domain to elect the foremost solutions from the Pareto optimal solution set. MOIMBO, together with the Self Adaptive and Greedy Strategies, have been incorporated to enrich the performance of the proposed algorithm. The capability and effectiveness of the proposed algorithm are measured with NSGA-II and MOPSO algorithms. The simulation results prompt that the proposed MOIMBO algorithm extensively diminishes the makespan, maximize the reliability, and guarantees the appropriate resource utilization when associating it with identified existing algorithms.

Keywords: Improved monarch butterfly optimization; cloud computing; makespan; reliability; fuzzy dominance; task scheduling



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Enhanced Evolutionary Feature Selection and Ensemble Method for Cardiovascular Disease Prediction

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Abstract

Cardiovascular Disease (CVD) is one among the main factors for the increase in mortality rate worldwide. The analysis and prediction of this disease is yet a highly formidable task in

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Fuel Prediction Based on Driving Behavior using Machine Learning Techniques

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Abstract : The fuel consumption prediction based on driving behavior is very important in automobile industry. As there is a hike in fuel price on daily basis, it is important to know the amount of fuel consumed by the vehicle. Each vehicle running on road have a default mileage rate that is determined by the manufacturer with the help of initial vehicle conditions but it varies with the driving styles exhibited by the driver. In the proposed method the pre processed dataset is passed to the two ML (machine learning) algorithms, LR(Linear Regression) and RF(Random Forest). This

Machine Learning for Plant Species Classification using Leaf Vein Morphometric

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FLIGHT DELAY PREDICTION USING SUPERVISED LEARNING

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Abstract - Flight delay is a significant problem that negatively impacts the aviation industry and costs billions of dollars each year. Most existing studies investigated this issue using various methods based on applying machine learning methods to predict the flight delay. However, due to the highly dynamic environments of the aviation industry, relying only on single route of airport may not be sufficient and applicable to forecast the future of flights. The purpose

1.1. FLIGHT DELAY PREDICTION

Flight delays lead to negative impacts, mainly economical for commuters, airline industries and airport authorities. Furthermore, in the domain of sustainability, it can even cause environmental harm by the rise in fuel consumption and gas emissions. Hence, these factors indicate how necessary and relevant it has become to predict the delays

International Journal of Computational Intelligence Systems

ABSTRACT

1. INTRODUCTION

2. LITERATURE STUDY

3. DATASET DESCRIPTION

4. MATERIALS AND METHODS

5. PROPOSED METHODOLOGY

6. RESULTS AND DISCUSSION

7. CONCLUSION

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A Heuristic and ANN based Classification Model for Early Screening of Cervical Cancer

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INTELLIGENT ANIMAL DETECTION SYSTEM USING IOT AND DEEP LEARNING

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ABSTRACT

One of the foremost requirements for livelihood is agriculture. Low productivity of crops is one of the issues faced by the farmers in our country. Crops destroyed by wild animals is a major issue in low productivity. The agricultural fields must be protected from any undesirable interruption from animals. In traditional methods, farmers use crackers, electrical fences, etc., to keep animals away from their fields but it is a risk factor that harms both humans and animals. Our proposed system detects the presence of animals using PIR and LDR sensors. If the sensor starts to detect, the camera is turned on to active mode to capture the image of the environment. The captured image is then compared with the already stored images of animals using image processing techniques. After the animal is identified, the system alerts the farmer through a mobile application about the animal and the

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Impact factor based data sanitization in association rule mining

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Firmware Malicious Attack Detection Using Deep Poison Regression

(FM-DPR)

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Securing Communication in the IoT- Based Power Constrained Devices in Health Care System

Sandhya.K.N.Sarma, Hemraj.Shobharam.Lankuch, E. C. Blessie • Published 30 May 2021 • Computer Science • Regular Issue

One of the most appealing IoT application areas is medical care and health care. This promising technology is reshaping current health-care service that comply with treatment and medication at home. The core part of IoT constitutes sensors and various devices for diagnosis and imaging. Many studies

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Prediction of Coronary Artery Disease Using Enhanced Feature Selection Using Firefly Based Optimization

Jayamol P James, E. Chandra Blessie

PDF

Abstract

Coronary Artery Disease (CAD) is an uncontrolled deadly disease that

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