DOI: http://doi.org/10.46632/jdaai/1/2/5

REST Journal on Data Analytics and Artificial Intelligence
Vol: 1(2), 2022
REST Publisher; ISSN: 2583-5564
Website: http://restpublisher.com/journals/jdaai/

Understanding the Performance of Micro and Small Entrepreneurs by (COPRAS)

*[1]Janhavi Chaidhanya G, [2]M. Ramachandran, [2]Kurinjimalar Ramu, [2]Ashwini Murugan
[1]Manonmaniam Sundaranar University, Tamil Nadu, India
[2]REST Labs, Kaveripattinam, Krishnagiri, Tamil Nadu, India
*Corresponding author Email: janmil2006@gmail.com

Abstract. Micro and Small Entrepreneurs Micro-entrepreneurs, those who own and operate businesses with fewer than five employees, are the most common type of entrepreneurs in the world and make up a large part of the informal economy in low-income countries. Micro and Small Entrepreneurs of the proposed method Comparative analysis to illustrate the application Conducting and credit evaluation Example is used. COPRAS (Complex Proportional Evaluation is proposed to evaluate the possible maintenance strategy. Linguistic terms are used to evaluate the ratings and weights. The rankings of the alternatives are COPRAS Entrepreneur 1, Entrepreneur 2, Entrepreneur 3, and Entrepreneur 3 Entrepreneur. Credit histories, behavioral preference, performance skills, identity features, and interpersonal relationships. Entrepreneurs 2 got the first rank whereas Entrepreneurs have the lowest rank. In this paper, Micro and Small Entrepreneurs 2 is got the first rank whereas the Entrepreneurs3is has the lowest rank.
Key words: Micro and Small Entrepreneurs, MCDM

1. Introduction

Entrepreneurship is about creating SMEs It is a process that leads to, at the same time SMEs being individuals or Managed by owner- managers Companies or business ventures. So, based on purpose, entrepreneurs invent, innovate and establish businesses. A micro-enterprise is a company that invests in plants, machinery and equipment. 1 crore, and turnover not exceeding Rs. 5 crores. A small company is a company that invests in plant, machinery and equipment. 10 crores and a turnover Enterprises with investment 1 crore onwards 10 crores and Rs above Rs.5 below Rs 50 cores Small businesses are called. Finally, Firms with an investment of 1 crore up to and a Turnover of Rs. 5 cores are defined as micro firms. Large Enterprise Entrepreneurship, Small Business Entrepreneurship Different Types of Entrepreneurship Scalable Start-up Entrepreneurship Social Entrepreneurship, Home-primarily based, home-primarily based entrepreneurs are self-employed, Internet-primarily based, Internet-based marketers behavior their enterprise on-line and use virtual technology to support enterprise activities, way of life, high-performance, network, assignment capital, franchise layout, for our functions, we divide them into five categories: Technical, Hybrid, Instructional, Operational and Sentinel SMEs. Each of those classifications has specific traits and contributes to our paintings in specific ways. Not all SMEs are created the same, and that is an actual advantage for practitioners. Complexity ratio estimation several criteria will make the selection A problem solver an analytical tool. First, the Cobras approach became evolved in a concrete context to make a decision.

2. Micro and Small Entrepreneurs

Micro and Small Entrepreneurs. For entrepreneurs, the loan appraisal process has some alternatives and it is multiple because it has influential indicators as a criterion for decision-making (MCDM) problems may be approved. Improve uncertainty information to express, and solve the problem of four-branch fuzzy the set (FBFS) is provided, which is a true-member function, the unknown membership function and due to incorrect member operation classified. In the paper, the distance-based estimation from average solution (EDAS) method is extended MCDM under four-branch clarity used to handle problems environments. These obvious areas of improvement include integrating the interval weight vector, determining the mean solution, transforming the decision matrix, and analyzing the changing trend of the coefficients. To demonstrate the applicability and rationality of the proposed method in practice, an illustrative example of credit assessment for some micro and small entrepreneurs is implemented [1]. Micro and Small Enterprises (MSEs), which are financial in the region are pillars of progress (Govt of Poker 2011 and Finance of the Republic of Indonesia Ministry of Regional Finance Directorate 2013). Improvement fairness, activity creation and poverty relief [2].Short and short Industries (MSEs). In this area, MSME in Women Salesmen is A must for everyone in international locations within the global mainly growing countries. In the international marketplace, most of the arena's largest companies maintain to offer a few services to distinct markets, shopping for quite a few additives and substances from smaller companies that serve a specific area of interest [3].Micro-organizations (SMMEs) – Linked to sturdy casual and Trade, Entrepreneurship and System of migration Transnational networks. That Some of the relationships are straightforward, consisting of casual area pass-border investors and "shopkeepers". Others are less apparent, living in transnational networks, even though they may be vital for the capitalization

Copyright@ 2022 REST Publisher

and sustainability of migrant companies [4].Small and compact Enterprises (MSSEs, hereinafter)are a crucial element inside Growing of Ethiopia's Stability of economic development, its importance sector Industrial policy in various documents, MSSE Development Strategy and development and Transformation Plans I and II mentioned with Both the extent of unemployment and the first-class of jobs stay a situation to accelerate increase and decrease poverty, although boom and exchange are strongly underscored by way of the improvement of the world [5].Small marketers in six business districts in Italy and integration of the above 3 ranges. Micro and Meso respectively and in macro layers' Small entrepreneurs in the remaining phase, some evidence of this latter speculation Discusses, SC of the Italian Provinces large local in grant use of variations. Small entrepreneurs seek advice from an analysis of the specific function performed with the aid of enterprise interest associations on the neighborhood degree. Membership prices in these associations various greatly in the various six areas undertaken a look at. Small entrepreneurs can revel in the high-quality endowment of SC at 3 tiers. A higher share of local companies is growing right here than elsewhere. Novena's location is the only region affected by scarcity in all dimensions, and six for the general length of the segments of the companies that grow the upper length reduces the ratio [6]. The finding of this takes a look at suggests that in micro and small firms that contribute to employment technology and innovation, ladies are extra empowered in decision-making, which might be better performers in employment generation and innovation. They made their own commercial enterprise decisions and took manipulate over credit usage and investment. It is quite distinctive for women who have less Decision making power and their Husbands credit score and control business choices our discovery look Less at their choice Managing women is wrong Proves that they are using loans for different costs in preference to enterprise development [7].Micro and small marketers can get loans from conventional Banks Especially High Dangerous Right Lack of collateral and small credit length, which calls for high transaction fees, these are the principal elements figuring out the poor Attitude of banks in small and micro marketers Every U. S. of the arena they once were in a while perform within the informal region; This is especially actual for small groups. Many small entrepreneur's illiterate and Information is hard to come by [8].Small and Micro Enterprises. They have a look at arguing that entrepreneurs in tourism in South Africa can analyse the revel of MSE from growing international locations. Whereas Adeljevic examines issues associated with small commercial enterprise corporations. Through 317 employer surveys and fifty-seven in-depth interviews in various areas of New Zealand, the study suggests that the increase of small groups depends on a ramification of things associated with the enterprise owner/manager, the nature of the tourism pastime and its region, and the commercial enterprise surroundings. [9].Micro and Small Scale in the Republic of Yemen to the needs of companies and its customers how responsive it is. From MFI packages 117 women vendors who received minimum assistance, of micro and small scale businesses Statistics of the survey of owners these studies are fully formed by those girls Perceived effectiveness of MFI schemes and to assess significance marketers, a 2nd spherical Deep semi-dependency with 27 respondents Interviews were conducted. Microcredit The findings show that it does not reduce however additionally offer credit score to women to begin their very own organizations. However, girl marketers gaining access to microcredit face diverse troubles [10].Micro and Small Enterprises for women-owned micro and that performance of small Comprehensive evidence indicates organizations (herein known as MSEs) have played a critical position in a country's improvement and the well-being of groups by way of developing jobs, wealth and innovation in Ethiopia. Firms owned with the aid of female entrepreneurs are found in special categories. Micro and Small Enterprises (MSEs). On micro and small Tax, they argued companies affect their performance in terms of profitability in exceptional approaches. The Micro and Small Enterprises Companies policy and Strategic Microfinance Institutions to be Recommends only group presenting financial savings and credit score services to entrepreneurs. However, microfinance establishments are typically confined to the price range. For this purpose, the government should review the financing coverage and techniques of MSEs until financing is a concern for enterprise operation and growth [11].In precis, Micro and small enterprises internally Rely closely on equity financing and Stay away from debt financing Externally fair using funds. as a closing lodge. Micro and Small Enterprise's Idioms and idioms in a sympathetic manner to remove Questions are formulated, which are incomprehensible to ability respondents. The questionnaire was piloted previous to recruitment and revisions and revisions have been made wherein suitable. Total company numbers and phrases of probabilities Even bigger figures containing micro and small companies. In specific, 902.631 organizations perform in Greece, employing about two million human beings. Small and micro firms with 50 employees represent the maximum important part of the commercial enterprise economic system. The capability to create employment possibilities, adaptability to the Economic environment and harm Regression in resulting events are higher in current years Studies are difficult However, this is a broad area, Statistics show, and a place that desires further investigation [12].An entrepreneur "is someone who starts a business and is willing to stand losses that allows you to make cash." Credit records are a file of ways you have controlled to pay off debts like credit cards and loans. Your credit score history is recorded in your credit score reviews, which additionally incorporate additional records approximately your finances. Behavioural choice here, behavioural preference is described as the type of motion sequences that human beings are willing to follow to finish unusual obligations. Performance Skills Performance talents consult with the skills and abilities that someone reveals in sports, along with belief, emotional perception, emotional law, cognition, communiqué, and social capabilities. Identity Aspects Identity management (IT control) is an organizational method for making sure that people have a suitable get right of entry to technology assets. This includes the identity, authentication and authorization of someone or persons to advantage get admission to programs, structures or networks. Interpersonal Relationships an interpersonal courting is a social interaction or interplay between two or greater people. Personal relationships can consist of your partner, cherished ones, close pals, acquaintances, co-workers, and many others who shape social connections in your existence.

3. COPRAS

COPRAS (Complex Proportionality Assessment) is one of the most used Multi-Criteria Decision Making (MCTM) methods, and the ratio of the best solution Determining the solution with the best rate in the set of possible alternatives by Providing a better alternative Bad SolutionThis technique has Decision-making problems Various to solve used by researchers [13]. The COPRAS-G method requires identifying selection criteria, evaluating information related to these criteria, and developing methods to evaluate Meeting the participant's needs Criteria for doing to assess the overall performance of the surrogate. Decision analysis involves a Decision Maker (DM) Situation to consider a particular set of alternatives and select one among several alternatives, usually with conflicting criteria. For this reason, the developed complexity proportionality assessment (COPRAS) method can be used [14]. In 1996 in Lithuania COPRAS (Complex Proportion evaluation) method was developed. construction, economics, real estate and management. One of the articles assesses the risks involved in construction projects. The assessment is based on various multi-objective assessment methods. The risk assessment indices are selected considering the interests, objectives and factors of the countries that influence the construction efficiency and real estate price increase[15] to describe and consider the task model. Complex Proportionality Assessment (COPRAS) Method Similar to any Many other criteria that will make the decision (MCDM) tool, the first Proposed COBRAS method of several related criteria is Basically for alternatives Used to prioritize criterion weights. This method is the better and Worst-Best Solution Best decision considering Selecting alternatives[16]. Cobras approach is used for device tool choice; Because of this, the triangle Ambiguous numbers are selected for their computational performance. Three area specialists are selected to assign weights and by way of combining the fuzzy cobra's method, System 1 (MC1) and device 2(MC2) similarly are ranked, with the way of machines three and four. -based total approach is utilized in a mixture of fuzzy. COPRAS assesses the complexity of consumer dating management (CRM) performance. A combined choice matrix is obtained from a panel of 20 specialists offered 3 options with the set, and 5 criteria Assessments are done [17].COPRAS to resolve MCDM issues, wherein the weights of the criteria and Performance ratings of alternatives are absolute Based on linguistic terms are calculated. Comparison of criteria Importance calculated and Cobras method become used to assess renovation strategies [18]. This has a look at ambitions to develop the impact of the latest overall performance metrics in TPM and COPRAS in an ambiguous context Primarily multi-criteria selection based on opinions Use the do method. The looseness of the paper is prepared as follows. Section 1 disturbance and Literature review describes. Section 2 Literature Evaluation and Cobras-G Approach Introducing the basics in sections three and four, Cobras G and the application of the proposed Cobras method [19].Complex proportional estimation approach with grey c language Numbers (COPRAS-G) approach. Cobras- G's idea approach is based on standards values expressed in durations, actual decision-making conditions, and programs of Gray Systems Theory. Diploma [20].COPRAS method changed into The most relevant social media platform Rank and choose is used. Proposed Applicability of the structure We proved and proved the character [21].COPRAS (Complex Proportionality Assessment) To examine the Cumulative of an alternative Performance, it is essential to become aware of the maximum vital criteria, examine the options and compare the facts Depending on those criteria to fulfil the wishes of the DMs to compare grades evaluation involves a situation in which a DM must pick amongst several downloaded alternatives given a selected set of commonly conflicting standards. For this motive, the developed complex proportionality evaluation (COPRAS) method can be used in real situations, alternatives The criteria for assessment are vague is related to the factor, And the values of the standards are real and Cannot be expressed with numbers [22].

4. Analysis and Discussion

Table 1 shows the Micro and small entrepreneurs for COPRAS Method. Credit histories, Behavior preferences, Performance abilities, Identity features, and Interpersonal relationships. Entrepreneur 1, Entrepreneur 2, Entrepreneur 3Entrepreneur 4, Entrepreneur 5 and Figure 1. Shows the Micro and small entrepreneurs for COPRAS method Entrepreneur 1, Entrepreneur 2, Entrepreneur 3Entrepreneur 4, Entrepreneur 5 It is seen that entrepreneur 5 is showing the highest value for credit histories and entrepreneur 4 is showing the lowest value. Entrepreneur 5 is showing the highest value for behaviour preference and entrepreneur 3 is showing the lower value. Entrepreneur 2 is showing the highest value for performance abilities and entrepreneur 4 is showing the lowest value. Entrepreneur 2 is showing the highest value for identity features and entrepreneur 4 is showing the lowest value. Entrepreneurs 1, and 3 is showing the highest value for interpersonal relationships and entrepreneur 2 is showing the lowest value.

TABLE 1. Micro and small entrepreneurs

	Credit histories	**Behavior preference**	**Performance abilities**	**Identity features**	**Interpersonal relationships**
Entrepreneur 1	31.08	139.53	29.15	22.05	66.00
Entrepreneur 2	29.12	142.97	33.69	27.30	6.00
Entrepreneur 3	24.08	122.58	29.18	23.10	66.00
Entrepreneur 4	23.17	128.28	24.60	17.59	34.00
Entrepreneur 5	33.33	186.41	27.96	18.89	45.00

Copyright@ REST Publisher

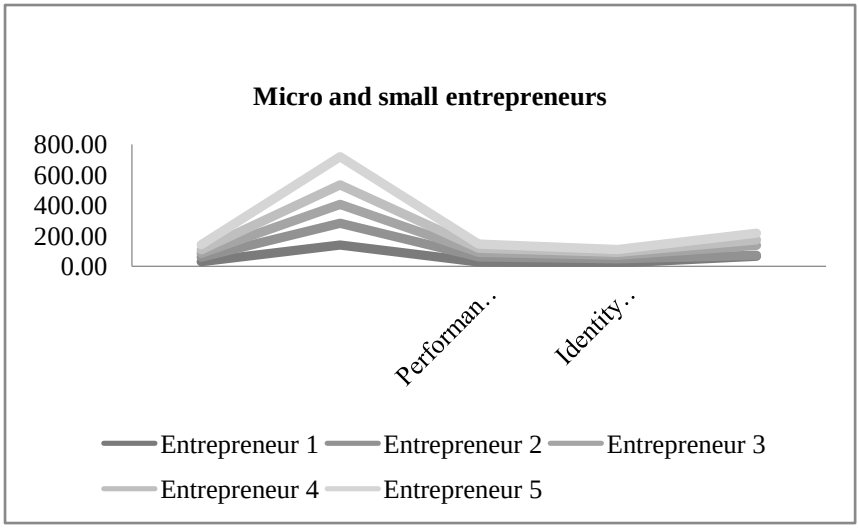

FIGURE 1. Micro and Small Entrepreneurs

TABLE 2. Normalized Data

Credit histories	Behavior preference	Performance abilities	Identity features	Interpersonal relationships
0.22	0.19	0.20	0.20	0.30
0.21	0.20	0.23	0.25	0.03
0.17	0.17	0.20	0.21	0.30
0.16	0.18	0.17	0.16	0.16
0.24	0.26	0.19	0.17	0.21

Table 2 shows the Micro and small entrepreneurs Normalized Data for Credit histories, Behavior preference, Performance abilities, Identity features, Interpersonal relationships. Normalized value.

TABLE 3. Weight ages

Weight ages				
0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25
0.25	0.25	0.25	0.25	0.25

Table 3 shows Weightages used for the analysis. We taken same weights for all the parameters for the analysis

TABLE 4. Weighted normalized decision matrix

Weighted normalized decision matrix				
0.06	0.05	0.05	0.05	0.08
0.05	0.05	0.06	0.06	0.01
0.04	0.04	0.05	0.05	0.08
0.04	0.04	0.04	0.04	0.04
0.06	0.06	0.05	0.04	0.05

Table 4 shows the weighted normalized decision matrix for Credit histories, Behavior preference, Performance abilities, Identity features, Interpersonal relationships is also multiple value.

Copyright@ REST Publisher

TABLE 5. Micro and Small Entrepreneurs Bi, Ci, Min (Ci)/Ci

	Bi	Ci	Min(Ci)/Ci
Entrepreneur 1	0.154	0.127	0.5493
Entrepreneur 2	0.160	0.070	1.0000
Entrepreneur 3	0.136	0.129	0.5391
Entrepreneur 4	0.128	0.080	0.8746
Entrepreneur 5	0.172	0.095	0.7308
	min(Ci)*sum(Ci)	0.0348	3.6938

Table 5 shows the Micro and Small Entrepreneurs Bi, Ci, Min (Ci)/Ci Credit histories, Behavior preference, Performance abilities, Identity features, Interpersonal relationships it is sum of minimum value.

TABLE 6. Final Result **of** Micro and Small Entrepreneurs

	Qi	Ui	Rank
Entrepreneur 1	0.228	77%	4
Entrepreneur 2	0.295	100%	1
Entrepreneur 3	0.209	71%	5
Entrepreneur 4	0.247	84%	3
Entrepreneur 5	0.271	92%	2

Table 6 shows the final result of COPRAS for Micro and Small Entrepreneurs. Qi Entrepreneurs is calculated using the Entrepreneurs 2 is having is Higher Value and Entrepreneurs 3 is having Lower value. Ui Entrepreneurs calculated using the Entrepreneurs 2 is having is Higher Value and Entrepreneurs 3 is having Lower value.

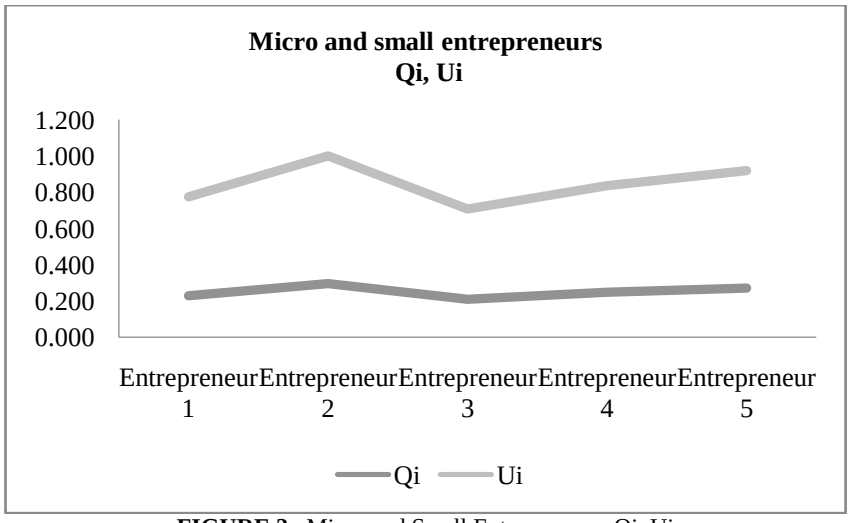

FIGURE 2. Micro and Small Entrepreneurs Qi, Ui

Figure 2shows the final result of COPRAS for Micro and Small Entrepreneurs. Qi Entrepreneurs is calculated using the Entrepreneurs 2 is having is Higher Value and Entrepreneurs 3 is having Lower value. Ui Entrepreneurs calculated using the Entrepreneurs 2 is having is Higher Value and Entrepreneurs 3 is having Lower value.

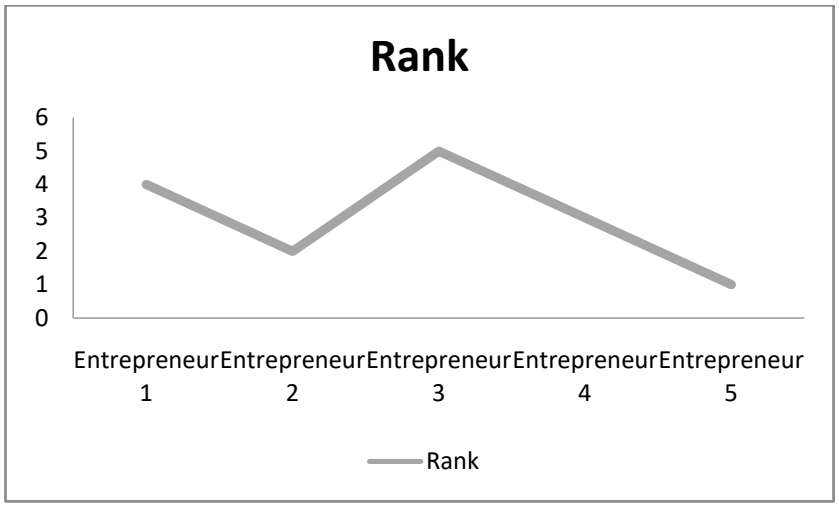

FIGURE 3. Shown the Rank

Figure 3 Shows Ranking of Micro and Small Entrepreneurs. Entrepreneurs 2 is got the first rank whereas is the Entrepreneurs3is having the Lowest rank.

5. Conclusion

Short and short entrepreneur credit assessment Since technique marketers has few options and influential indicators It is a multiple criteria test-making (MCTM) problem that can be detected. Uncertain to better convey information (FBFS) is provided trouble, that's characterised via a real-member function, an unknown member feature, and a fake-member feature. In the paper, the space-based estimation from the common solution (EDAS) technique is extended and carried out to deal with MCDM troubles underneath 4-department fuzzy environments. These obvious areas of improvement encompass integrating the c language weight vector, figuring out the implied solution, remodelling the choice matrix, and analysing the trade trend of the coefficients. COPRAS (Complex Proportionality Assessment) is one of the maxima used Multi-Criteria Decision Making (MCDM) strategies, which affords the nice opportunity amongst a fixed of feasible alternatives by using figuring out the ratio of the nice solution and the solution with the high-quality ratio. Poor solution This approach is utilized by various researchers to remedy choice-making issues by the COPRAS-G technique, which is necessary to evaluate the overall performance of an opportunity, discover choice criteria, examine statistics related to those criteria, and develop techniques. To investigate standards to satisfy player desires. Decision analysis entails a scenario in which a decision maker (DM) has to remember a specific set of alternatives and select one in every of several options, commonly with conflicting criteria.

References

[1]. Ren, Jian, Chun-hua Hu, Shao-qian Yu, and Peng-fei Cheng. "An extended EDAS method under four-branch fuzzy environments and its application in credit evaluation for micro and small entrepreneurs." *Soft Computing* 25, no. 4 (2021): 2777-2792.

[2]. Maad, Faizal, SumardjoSumardjo, Amiruddin Saleh, and PudjiMuljono. "The autonomous development strategies of micro and small entrepreneurs through coorporate social responsibility in Bogor district of West Java." *International Journal of Science and Engineering* 7, no. 1 (2014): 70-76.

[3]. Anggadwita, Grisna, and WawanDhewanto. "The influence of personal attitude and social perception on women entrepreneurial intentions in micro and small enterprises in Indonesia." *International Journal of Entrepreneurship and Small Business* 27, no. 2-3 (2016): 131-148.

[4]. Saaran, Viraat, Vaishali Kushwaha, Sachi Gupta, and Gaurav Agarwal. "A Literature Review on Generative Adversarial Networks with Its Applications in Healthcare." In *Congress on Intelligent Systems*, pp. 215-225. Springer, Singapore, 2020.

[5]. Nautiyal, Aditi, and Amit Kumar Mishra. "Machine learning approach for intelligent prediction of petroleum upstream stuck pipe challenge in oil and gas industry." *Environment, Development and Sustainability* (2022): 1-27.

[6]. Peberdy, Sally, and Christian Rogerson. "Transnationalism and non-South African entrepreneurs in South Africa's small, medium and micro-enterprise (SMME) economy." *Canadian Journal of African Studies/Revue canadienne des étudesafricaines* 34, no. 1 (2000): 20-40.

[7]. Kshirsagar, Pravin, Akshay Pote, K. K. Paliwal, Vaibhav Hendre, Pranav Chippalkatti, and Nikhil Dhabekar. "A review on IOT based health care monitoring system." *ICCCE 2019* (2020): 95-100.

[8]. Meressa, HayelomAbrha. "Growth of micro and small scale enterprises and its driving factors: empirical evidence from entrepreneurs in emerging region of Ethiopia." *Journal of Innovation and Entrepreneurship* 9, no. 1 (2020): 1-22.

[9]. Sreejith, R., and S. Senthil. "Dynamic Data Infrastructure Security for Interoperable e-Healthcare Systems: A Semantic Feature-Driven NoSQL Intrusion Attack Detection Model." BioMed Research International 2022 (2022).

[10]. Gupta, Sachi, and Gaurav Agarwal. "Hybrid fuzzy-based Deep Remora Reinforcement Learning Based Task Scheduling in Heterogeneous Multicore-processor." *Microprocessors and Microsystems* 92 (2022): 104544.

[11]. Farooqui, Nafees Akhter, Amit Kumar Mishra, and Ritika Mehra. "IOT based Automated Greenhouse Using Machine Learning Approach." *International Journal of Intelligent Systems and Applications in Engineering* 10, no. 2 (2022): 226-231.

[12]. Chiesi, Antonio M. "Measuring social capital and its effectiveness. The case of small entrepreneurs in Italy." *European Sociological Review* 23, no. 4 (2007): 437-453.

[13]. Kshirsagar, Pravin R., and Sudhir G. Akojwar. "Prediction of neurological disorders using optimized neural network." In *2016 International Conference on Signal Processing, Communication, Power and Embedded System (SCOPES)*, pp. 1695-1699. IEEE, 2016.

[14]. Kumar Pandey, Rakesh, Shrey Aggarwal, Griesha Nath, Anil Kumar, and Behzad Vaferi. "Metaheuristic algorithm integrated neural networks for well-test analyses of petroleum reservoirs." *Scientific Reports* 12, no. 1 (2022): 1-16.

[15]. Al-shami, Sayed Samer Ali, MohdRazali Muhamad, Izaidin Majid, and Nurulizwa Rashid. "Women's entrepreneurs' micro and small business performance: insights from Malaysian microcredit." *International Journal of Entrepreneurship and Small Business* 38, no. 3 (2019): 312-338.

[16]. Agarwal, Gaurav, Hari Om, and Sachi Gupta. "A learning framework of modified deep recurrent neural network for classification and recognition of voice mood." *International Journal of Adaptive Control and Signal Processing* 36, no. 8 (2022): 1835-1859.

[17]. De Gobbi, Maria Sabrina. "Mutual guarantee associations for small and micro-entrepreneurs: Lessons learned from Europe and Africa." *African Development Review* 15, no. 1 (2003): 23-34.

[18]. KEYWORD, USING DENSITY OF. "WEB GRAPH BASED SEARCH BY USING DENSITY OF KEYWORD AND AGE FACTOR." (2013).

[19]. Baig, Saranjam, Mir Qasim, Li Xuemei, and Khalid MehmoodAlam. "Is the China-Pakistan economic corridor an opportunity or a threat for small and micro-entrepreneurs? Empirical evidence from Northern Pakistan." *Sustainability* 12, no. 5 (2020): 1727.

[20]. Arya, Vishakha, Amit Kumar Mishra Mishra, and Alfonso González-Briones. "Analysis of sentiments on the onset of Covid-19 using Machine Learning Techniques." *ADCAIJ: Advances in Distributed Computing and Artificial Intelligence Journal* 11, no. 1: 45-63.

[21]. Ahmad, Syed Zamberi. "Microfinance for women micro and small-scale entrepreneurs in Yemen: achievements and challenges." *International Journal of Entrepreneurship and Small Business* 16, no. 1 (2012): 102-120.

[22]. Kshirsagar, Pravin R., Anil N. Rakhonde, and Pranav Chippalkatti. "MRI image based brain tumor detection using machine learning." *Test Engineering and Management* 81 (2020): 3672-3680.

[23]. Sreejith, R., and K. R. Sinimole. "Modelling evacuation preparation time prior to floods: A machine learning approach." Sustainable Cities and Society 87 (2022): 104257.

[24]. Agarwal, Gaurav, Vikas Maheshkar, Sushila Maheshkar, and Sachi Gupta. "Vocal Mood Recognition: Text Dependent Sequential and Parallel Approach." In *Applications of Artificial Intelligence Techniques in Engineering*, pp. 131-142. Springer, Singapore, 2019.

[25]. Alene, EndalewTerefe. "Determinants that influence the performance of women entrepreneurs in micro and small enterprises in Ethiopia." *Journal of Innovation and Entrepreneurship* 9, no. 1 (2020): 1-20.

[26]. Talwar, Akshit, Alka Chaudhary, and Anil Kumar. "Encryption Policies of Social Media Apps and Its Effect on User's Privacy." In *2022 10th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO)*, pp. 1-4. IEEE, 2022.

[27]. Daskalakis, Nikolaos, Robin Jarvis, and EmmanouilSchizas. "Financing practices and preferences for micro and small firms." *Journal of Small Business and Enterprise Development* (2013).

[28]. Farooqui, Nafees Akhter, Amit Kumar Mishra, and Ritika Mehra. "Automatic crop disease recognition by improved abnormality segmentation along with heuristic-based concatenated deep learning model." *Intelligent Decision Technologies* Preprint: 1-23.

[29]. Yazdani, Morteza, Ali Alidoosti, and EdmundasKazimierasZavadskas. "Risk analysis of critical infrastructures using fuzzy COPRAS." *Economic research-Ekonomskaistraživanja* 24, no. 4 (2011): 27-40.

[30]. Aghdaie, Mohammad Hasan, SarfarazHashemkhaniZolfani, and EdmundasKazimierasZavadskas. "Market segment evaluation and selection based on application of fuzzy AHP and COPRAS-G methods." *Journal of Business Economics and Management* 14, no. 1 (2013): 213-233.

[31]. Akojwar, Sudhir G., and Pravin R. Kshirsagar. "Performance evolution of optimization techniques for mathematical benchmark functions." *International Journal of Computers* 1 (2016).

Copyright@ REST Publisher

[32]. Kildienė, Simona, ArturasKaklauskas, and EdmundasKazimierasZavadskas. "COPRAS based comparative analysis of the European country management capabilities within the construction sector in the time of crisis." *Journal of Business Economics and Management* 12, no. 2 (2011): 417-434.

[33]. Singh, Prabhat Kumar, Gaurav Agarwal, and Sachi Gupta. "A new ranking technique for ranking phase of search engine: Size based ranking algorithm (SBRA)." *International Journal of Computer Applications* 82, no. 5 (2013).

[34]. Bangroo, Rashika, Utsav Gupta, Roshan Sah, and Anil Kumar. "Cryptocurrency Price Prediction using Machine Learning Algorithm." In *2022 10th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO)*, pp. 1-4. IEEE, 2022.

[35]. Das, Manik Chandra, Bijan Sarkar, and Siddhartha Ray. "A framework to measure relative performance of Indian technical institutions using integrated fuzzy AHP and COPRAS methodology." *Socio-Economic Planning Sciences* 46, no. 3 (2012): 230-241.

[36]. Mishra, Amit Kumar, and Shweta Paliwal. "Mitigating cyber threats through integration of feature selection and stacking ensemble learning: the LGBM and random forest intrusion detection perspective." *Cluster Computing* (2022): 1-12.

[37]. Dhiman, Harsh S., and Dipankar Deb. "Fuzzy TOPSIS and fuzzy COPRAS based multi-criteria decision making for hybrid wind farms." *Energy* 202 (2020): 117755.

[38]. Akojwar, Dr Sudhir, Pravin Kshirsagar, and Vijetalaxmi Pai. "Feature extraction of EEG signals using wavelet and principal component analysis." In *National Conference on Research Trends In Electronics, Computer Science & Information Technology and Doctoral Research Meet*. 2014.

[39]. Fouladgar, Mohammad Majid, AbdolrezaYazdani-Chamzini, Ali Lashgari, EdmundasKazimierasZavadskas, and ZenonasTurskis. "Maintenance strategy selection using AHP and COPRAS under fuzzy environment." *International journal of strategic property management* 16, no. 1 (2012): 85-104.

[40]. TuranogluBekar, Ebru, Mehmet Cakmakci, and CengizKahraman. "Fuzzy COPRAS method for performance measurement in total productive maintenance: a comparative analysis." *Journal of Business Economics and Management* 17, no. 5 (2016): 663-684.

[41]. Agarwal, Gaurav, Vikas Maheshkar, Sushila Maheshkar, and Sachi Gupta. "Recognition of emotions of speech and mood of music: a review." In *International Conference on Wireless Intelligent and Distributed Environment for Communication*, pp. 181-197. Springer, Cham, 2018.

[42]. Kapoor, Nishant Raj, Ashok Kumar, Anuj Kumar, Anil Kumar, and Krishna Kumar. "Transmission Probability of SARS-CoV-2 in Office Environment Using Artificial Neural Network." *IEEE Access* 10 (2022): 121204-121229.

[43]. Zolfani, SarfarazHashemkhani, NahidRezaeiniya, Mohammad Hasan Aghdaie, and EdmundasKazimierasZavadskas. "Quality control manager selection based on AHP-COPRAS-G methods: a case in Iran." *Economic research-Ekonomskaistraživanja* 25, no. 1 (2012): 72-86.

[44]. Farooqui, Nafees Akhter, Amit Kumar Mishra, and Ritika Mehra. "Concatenated deep features with modified LSTM for enhanced crop disease classification." *International Journal of Intelligent Robotics and Applications* (2022): 1-25.

[45]. Tavana, Madjid, Ehsan Momeni, NahidRezaeiniya, Seyed Mostafa Mirhedayatian, and HamidrezaRezaeiniya. "A novel hybrid social media platform selection model using fuzzy ANP and COPRAS-G." *Expert Systems with Applications* 40, no. 14 (2013): 5694-5702.

[46]. Kouchaksaraei, RamtinHaghnazar, SarfarazHashemkhaniZolfani, and Mahmood Golabchi. "Glasshouse locating based on SWARA-COPRAS approach." *International Journal of Strategic Property Management* 19, no. 2 (2015): 111-122.

Copyright@ REST Publisher