Int. J. Nonlinear Anal. Appl. 12 (2021) No. 2, 1187–1198
ISSN: 2008-6822 (electronic)
http://dx.doi.org/10.22075/IJNAA.2021.5195

Supervision calamity of public opinion actions based on field programmable gate array and machine learning

A. Srinivasa Rao [a], Brahmadesam Viswanathan Krishna [b], D. Saravanan [c,*], D. Beulah David [d], O. Rama Devi [e], Anju Asokan[f], D. Stalin David[g]

[a] *Department of CSE, Dhanekula Institute of Engineering & Technology, Vijayawada, India.*
[b] *Department of CSE, Rajalakshmi Engineering College, Chennai, India.*
[c] *Department of CSE, IFET Colleg of Engineering, Villupuram, India.*
[d] *Department of CSE, Jeppiaar Engineering College, Chennai, India.*
[e] *Department of CSE, Lakireddy Bali Reddy College of Engineering, Mylavaram, India.*
[f] *Department of ECE, Sri Krishna College of Technology, Coimbatore, India.*
[g] *Department of CSE, IFET Colleg of Engineering, Villupuram, India.*

(Communicated by Madjid Eshaghi Gordji)

Abstract

The community's rise, public opinion network's popularity, and emergency personnel's advancement have changed drastically. Individuals can now go online from any place and through communications systems to share their opinions and attitudes more efficiently and more often. As illustrated by the preceeding network approach, public sentiment on neural networks and IoT is critical for the public sector, the public interest, and a special event in an emergency (IoT). In terms of data security and anonymity, the proposed program is not safe and has environmental problems. Network public opinion's approach is based on FPGAs and machine education. FPGAs (Field Programmable Gate Array) Instant perspectives, possible future themes, knowledge exchange, excellent content and Team variance are used to build machine learning. In this popular sentiment network, several disasters have seriously threatened the security of our community. Public views on disaster networks in all type of internet media, such as internet news, blogs and webpages, are inextricably connected with society. This plays into unprecedented stress the ability of the government to deal with crises and their consequences.

Keywords: Emergency Management, Network Public Opinion Events, FPGA and Machine Learning

*Corresponding Author: D. Saravanan
Email addresses: asr.unguturu@gmail.com (A. Srinivasa Rao [a]), krishna.bv@rajalakshmi.edu.in (Brahmadesam Viswanathan Krishna [b]), saranmds@gmail.com (D. Saravanan [c,*]), beulahdavid@jeppiaarcollege.org (D. Beulah David [d]), odugu.rama@gmail.com (O. Rama Devi [e]), anjuasokan@skct.edu.in (O. Anju Asokan[f]), sdstalindavid707@gmail.com (D. Stalin David[g])

Received: March 2021 *Accepted:* June 2021

1. Introduction

As the Internet became more important and developed, a person's access to information has dramatically changed. Through their mobile devices, people can now voice their thoughts, feelings, and behaviour everywhere, everywhere, and regularly. The difficulties of the criminal side, marketing, and digital political opinion emergency cases drive this pattern. The interpretation of the public about the evacuation contract network travels through the Internet quickly. The distinguishable overall trend towards a single event is a common viewpoint and a general mood: communication commitment, information wealth and network cascading.

As the worldwide web and the surrounding world are highly interconnected, a variation of national crises is a significant source of concern for our society's security. The Emergency Network campaign FPGA (Field-programmable gate array) has put a lot of pressure on the device. In the public sector, urgencies, channel news, forums and websites are regulated and maintained. The interest of the public at large, scientists and culture has been struck by machine learning. In an emergency, it would help understand how the referendum laws are developed as well as how the Public services should deal with the widespread circulation of opinions via the Internet.

The Internet affects and changes the necessary environment for public images and creates new areas of public opinion based on the Internet. The Internet shapes and evolves the necessary public policy climate, as well as the development of emerging Internet-dependent public opinion areas that are influenced and affected by network conflicts and the emergence of an electronic data network. A lot of successful feelings are expressed in the media. The view of the public, as shown on the website. The support of such daily interactions shapes the perceptive and perspective trends of interprocess communication factors in our everyday lives. Two kinds of public opinion have existed so far: real political rhetoric and Internet public opinion. Both approaches and opinions, and demands of individuals on social issues are the same. Popular views are distributed through network media, leading to a public opinion network.

In an overall emergency network, conflict and distribution occur in real time. The most vital part of popular perceptions in public emergencies. The problem, however, is a problem for the public sector. Difficult, precise and instantaneous decisions are taken by the general public because of the rapid and remarkable increase in social media. On the other hand, the Online world is a fully accessible medium of communication. Public opinion in real time online reacts to crises if this is done in an effective and interactive way. The rash is the most significant key environmental concern that affects the dissemination of public feelings of the network in emergencies.

The government emergency network includes uncertainties, substantial incidents, statistical magnification, cyber drifts, mental problems and proximity. They provide soil, including uncertainties, major accidents, magnification details, cyber drifts and closeness, for infrastructure noise. Everything was damaged or dismissed in response to environmental issues and the basic data release process. Uncertainty and inconsistency have symbolic consequences because the complexity of the dissemination of knowledge has crossed an important distance. The spread of misinformation, errors and external system problems can lead to transmitting structure and failure of the device.

We differ from the general opinion of the university administration, which manages disasters. The only factor in the crisis was the passive handling of the Internet. The managers failed to pay sufficient attention to the media lies. Education, scientific analysis and online independence vote administration are all essential. When schools beyond the structures of "soft force" began to replenish their strategies for growth, they concentrated on increasing their productivity. The network environment plays many roles, in particular in building and growing values and ethical standards. Colleges' research and life is influenced by network characteristics and spreading habits and can take

time and time. It is a key human capital centre and the lack of focus on human resources in the management departments.

The FPGA ad is a new form of control and management via Campus networks with various points of view that represents unique challenges. FPGA advertising is a new form of control. It enhances the accessibility to network monitoring and repair. Social networks are issues of social administration, social and public issues, network tanks and points of view. The regulations allow for misleading claims in the online media, leading to irresponsibility, animosity and public crisis due to the lack of clear legal protection. If there is a challenge, management needs to address it in two ways: firstly, the management environment is specially designed for technical leadership. It lacks an emergency response strategy and an integrated, cohesive structure.

To deal with dynamic networking, the lack of maintenance and two-way coordination among students is problematic. While managers are focusing on publishing a range of knowledge and technologies, they cannot implement it effectively—unconstructed telecommunications networks and prevention and management philosophy to adapt the education of university students—when public feeling continues to be optimistic. On the other hand, universities have become departments and managers of government, with a shortage of management coordination. On the other hand, schools provide controllable network hardware. Current management and monitoring of students, resources, organization, and management benefits are restricted in students' networking activity. This makes compulsory rules easier to follow but also uneven administration. Everyone knows the facts of the case through the law on data communication.

2. Literature Survey

The word "public perception on the internet" refers to the gathering of all facts, behaviour patterns, feelings. In daily situations, world perception on the Internet is segmented, volatile and comprehensive. However, it is also easy for urgent changes to collect widespread constructive criticism on the Internet [20]. Following changes to the perception of unfavourable public views, a serious present situation can erupt and become the next crisis case [42]. The aim of an online referendum is to take into consideration the evolution of popular opinion, have an autonomous policy-making mechanism, critical assessment of future hazards and guide online referendum legislation [44]— an in-depth analysis of the developments in the emergency legislative referendum. They can be qualitatively and quantitatively categorized as essential or based on the internet refere6ndum phase when the testing method of analysis and early warning systems [41]. From a quantitative point of view, the digital political opinion unit operates step-by-step on psychological processes with relatively wide distinguishing features and qualitative structure. There is no conventional subtractive for the advancement of popular opinion [38].

The online public vote is divided into different stages based on the results of the data changes. The stage's rationality is hard to determine, and the general evolutionary view is not acceptable [14]. Given the lack of data on the segmentation phase of the public perception network, this tactic presents an innovative method for analyzing public opinion emergency networks combining theoretical and practical research [7]. To divide first, the theory of the emergency life cycle [13] is used. The time-series referendum data model is based on a quantitative perspective and evaluated in the surviving process [40], based on the referendum network's development level.

The word 'emergency vote network' refers to the instances under which a service provider detail system contains general statistical data and opinions on crises, public health concerns, social welfare and other issues [5]. It has all the features of online development of public opinion, although it has not yet developed [34] as a matter of urgency. The forensic test should thus be conducted in

accordance with the emergency response science theory. The level of entry is defined as a change from one level to the other, which is used to scientifically and confidently assess the conversion of the urgent referendum mechanism. There is a series of times from the referendum with two features: precision and parameter data [35]. Therefore, it is the point of turning point to evaluate if the time series distribution is identical, to get different views from time to time and to predict all trend trends [36].

As a result of the growth of social media, a popular feeling is growing. The users of Facebook apps, top stories, blogs and newspapers can give their views about social hotspots. Cultural impacts of social networking [17] go beyond the need for rapid data collection in referendums and the monitoring of referendums so that government officials or corporate financial institutions can receive scientific support [2]. You are facing two challenging tasks. One is the preprocessing of data. Firstly, as the Internet grows in popularity, the facts of the referendum become more popular [27]. Second, the raw data contains unnecessary details such as noise, announcements and inadequate material [16]. As a result, distracters need to be removed, redundant material removed, search results sorted, and additional data analyzed. Another activity is data mining, where sub-topics are identified in a broad range of opinion data [28].

A survey on various national issues and subjects. Public opinion. For example, every day, every polling station party calls Americans to see, at random, whether they endorse the presidential trajectory in the country. The public decision-makers collect, evaluate and perceive these personal perspectives [28]. This study is used by decision-makers to assess issues of public interest based on how voters see it. The interaction between several popular views on the generation of elections and legal changes is driven by the theory of democracy in the transmission of the framework of democracy. While some people might not think that there is a connection between popular feeling and reaction, there is. The exact price and how should it be implemented. This is all about [21].

2.1. Emergency Network Management Materials and Method FPGA and Machine Learning Public Opinion Events

A public opinion poll on several national issues and issues. Every day, for example, voting station parties contact different sectors spontaneously to decide whether the president has agreed or ignored global instructions. The decision-makers collected, analyzed and understood these personal experiences. Policymakers should use this study to judge public issues in terms of how they perceive them. The concept of democracy in transmitting the political framework guides the relationship between the different standard views produced by by-elections and public sector action. Figure 1 shows the argument; however, the reaction of the audience is not seen. It has to do with the specific volume and the implementation of network energy storage.

The majority of the public's views are in adolescent development based on their beliefs and behaviours, and representative democracy trust is based on the principles and ambitions of our lives. For all citizens, for example, America's belief in equal opportunities, fair treatment, rights and liberties is strongly embedded. Growing up in the USA, or coming from a society in which there is no confidence in certain principles. Our conduct is also influenced by our convictions. They make a contribution to the belief systems and priorities that we develop as a result of our lives. Over time, what our society and our government are doing in this case seems to match the wider behaviours about our belief systems, persons, conduct and opinions. This may be a set of criteria and a very well expression for those who are not familiar. Consequently, beliefs are based on principles and attitudes.

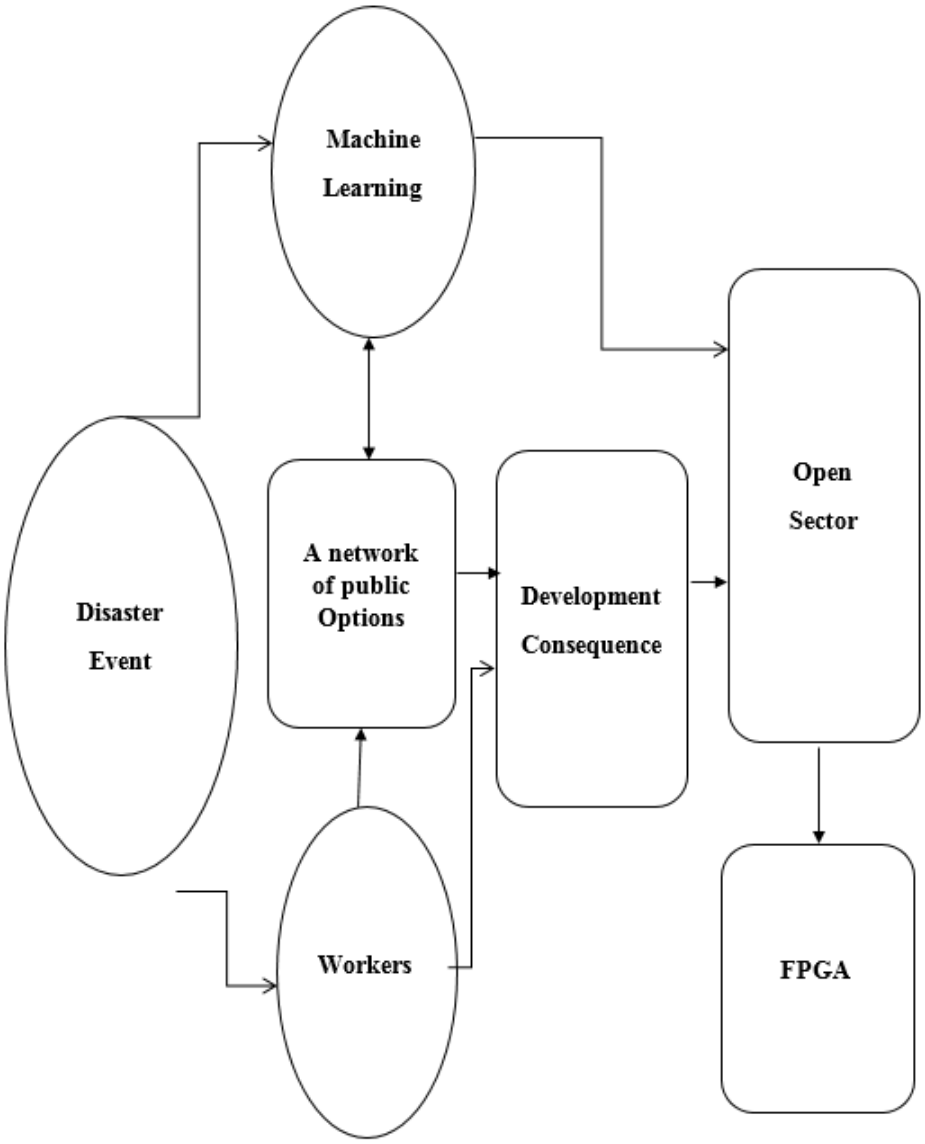

Figure 1: Emergency Network Public Opinion Functional diagram

2.2. Network Emergency Management Machine Learning Public Opinion Events

The general public also has a different understanding of ambulance networks than their operations and delivery. In emergencies, the most crucial element of the public network feeling in real-time. A detailed emergency assessment is, on the other hand, advisable. The government, social media and the public cooperate to achieve a quick and difficult emergency response. On the other hand, the Internet is a genuinely free space that works as an extensive networking platform. Its high effectiveness is improved by its efficiency, real-time engagement, and vast knowledge of the emergency network. Social media provides a global cyber area of network IDs for all people, regardless of gender, of all specialities, communities and social backgrounds. As a result, Internet users can easily express their relevant data, opinions, and discussions thanks to the popular sentiment. To avoid external pressures, explicit opinions, social identity and fundamental ethics and standards are used.

Figure 2 depicts the collection of data as a critical space to express collective interests, share ideas and transmit feelings. The emergency infrastructure has developed into a new incarnation of artificial intelligence and public opinion. Interactive contact, public involvement, and the complex impact of

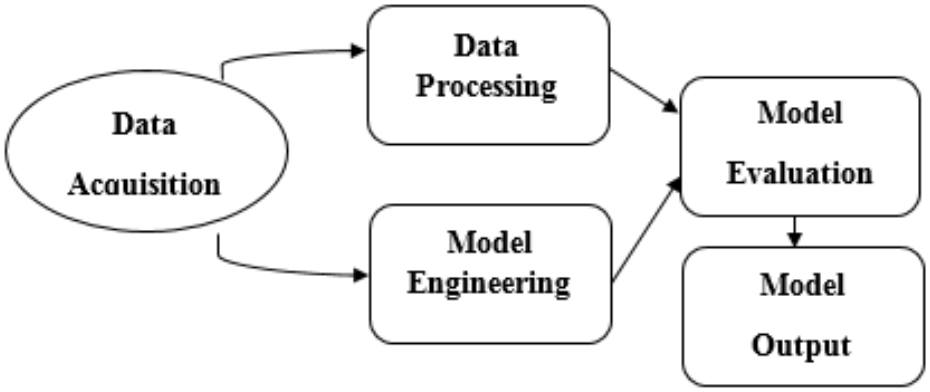

Figure 2: Block diagram of Machine Learning Based on Network Public Opinion Events

emergency clusters all help people to enhance their rights in their talk. Noise from system interference, which is a major external environmental factor, affects the provision of network emergencies. Amplifying information, mass polarity and control sophistication are three features that contribute to noise in the soil system, such as public needs, uncertainty and considerable danger. Environmental problems and dissemination strategies have been damaged or discarded in general. Since there is now a huge information gap in the complexity of the diffusion of awareness, confusion, and unsettlement have semántic effects. Rumours, misinterpretations and machine problems spreading in the external environment will lead to transmission and computer failures.

2.3. Network Public Opinion Events FPGA (Field-programmable gate array)

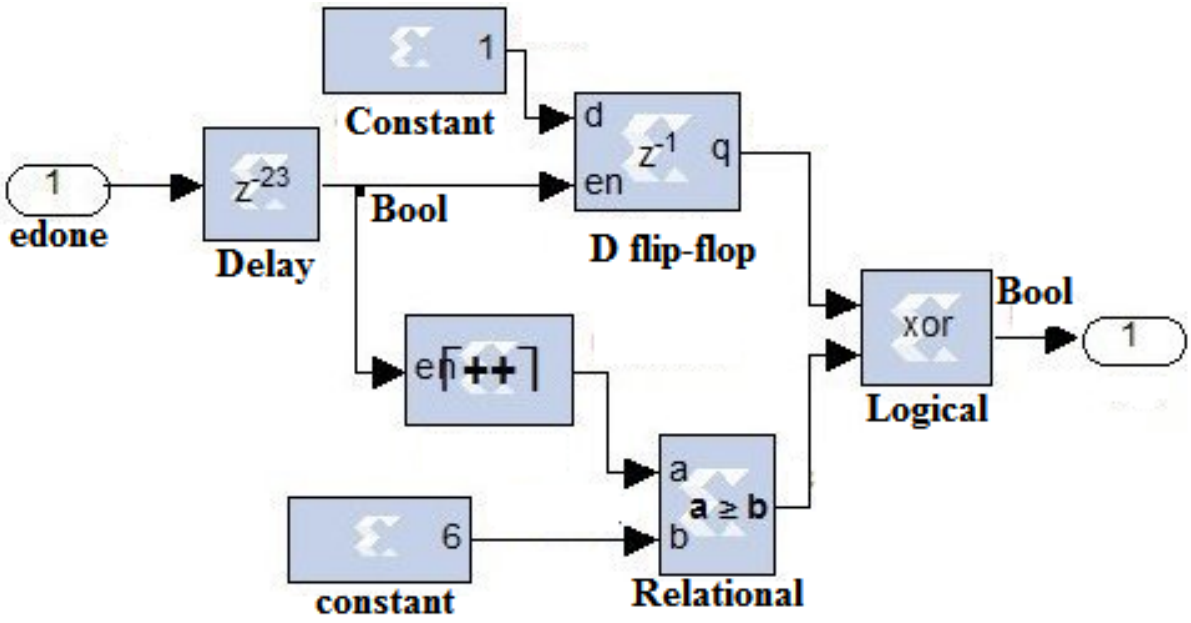

Figure 3: FPGA (Field-programmable gate array)

Figure 3 shows a public emergency-based FPGA (Field Program Gate Array). In news stories, the mainstream press can report crises to publish official events accurately. Often, online media shapes

their perspectives during the review process. Beware of commodity analysis, the dissemination through network news services of catastrophic information. A specific editorial team has also been sent to the online news media for information collection. There are several possibilities for the best news media networks that conduct online polls of the public opinion, while public opinion monitoring services are used to track results. As a result, network news agencies should double-check and double-check information received from different media outlets before submitting reports to administrative agencies.

2.4. Gain Ratio in FPGA

The Gain Ratio is the non-symmetrical calculatewith the purpose is developedin the direction of balancedesigned for the bias. GR is particularby means of equation (1)

$$GR = \frac{IG}{H(fr)} \qquad (1)$$

In the equation (1) presents, when the feature Y has to be predicted, the Information Gain(IG) has to normalized by means ofseparatingby means of the entropy of feature fr, and vice versa. Appropriate to this normalization, the Gain Ratio idealsconstantlydecrease in the series $[0, 1]$.

$$IG(fr, y) = H(fr) - H(fr|Y) \qquad (2)$$

Entropy (H) is a calculate of the uncertainty related with anindiscriminate variable. $H(fr)$ and $H(fr/Y)$ is the entropy of fr and the entropy of successive observing Y, correspondingly.

$$H(fr) = -\sum_i P(fr_i) log_2(P(fr_i)) \qquad (3)$$

The highest value of IG is 1. A feature with a high IG is relevant. IG is determined independently for every feature and the features with the top-k values are chosen as the appropriate features. This filter based FS algorithm doesn't remove redundant features.

$$H(fr|Y) = -\sum_i P(y_i) \sum_i P(fr_i|y_i) log_2(P(fr_i|y_i)) \qquad (4)$$

The further appropriate features have smaller GI values. GI of each feature is determined independently and the top k features with the smallest GI are chosen. Like IG, it moreover not removes unnecessary features.

$$GI(fr) = 1 - \sum_{i=1}^{C} [P(i|fr)]^2 \qquad (5)$$

Then f is scored as the sum of weighted variation in several classes and the same class. If fr is differentially expressed, it determination show higher variation for instances from several classes, consequently it will obtain higher score

$$SC_R(fr_i) = \frac{1}{p} \sum_{t=1}^{p} \left\{ -\frac{1}{m_{fr_t}} \sum_{fr_j \in NH_{fr_t}} d(f_{t,i} - f_{j,i}) + \sum_{y \neq y_{fr_t}} \frac{1}{m_{fr_t}} \frac{P(y)}{1 - P(y_{x_t})} \sum_{fr_j \in NM_{(fr_t, y}} d(f_{t,i} - f_{j,i}) \right\} \qquad (6)$$

where y_{frt} is the class label of the samplefr_t and $P(y)$ is the probability of an sample being from the class y. $NH(fr)$ or$NM(fr, y)$ represents a set of nearest points to sample fr with the similar class of fr, or a varied class (the class y), correspondingly. m_{fr_t} and m_{fr_t},yare the sizes of the sets $NH(frt)$ and $NM(frt, y)$, correspondingly. Generally, the size of both $NH(fr)$ and $NM(fr, y)$;¥$y \neq yfrt$, is set to a user defined constant k.

3. Result and Dicussion

FPGA (Gate Array programming field) is, unlike common assumes, a complex multi-factor interaction tool. Changes have contributed to the evolution of public feeling in the interaction of factors. Present the contact strategy for the position of the entire network via public sentiment and public opinion on the web. Machine learning is an internet-based dissemination approach. The publishing industry's information is focused on delivering material news and other resources that meet public needs. In the event of an emergency, all the government, online media, policymakers and the public play a part.

3.1. Network Events Public Opinion Machine Learning Analysis Emergency Management.

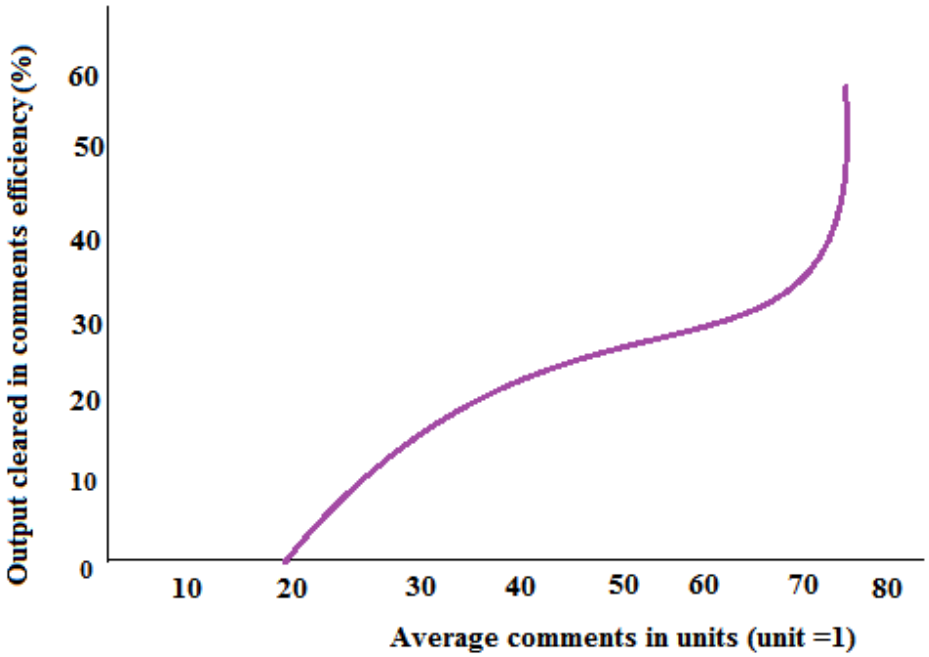

Figure 4: Analysis of Machine Learning-based Emergency Managemen

Figure 4: According to emergency management, the system's presence is a critical external environmental force influencing disseminating network public opinion in emergencies. Uncertainties, severe injury, magnification information, cyber cascades, and control problems, as well as proximity, all play a role in system emergency response.

3.2. Circuit diagram Emergency Management of Network Public Opinion

Figure 5 shows an example. During a public disaster response, authorities utilize public awareness systems to warn tourists, promote avoidance, and minimize adverse injuries. Machine learning is understanding the value of strategic contact in public health disaster preparation.

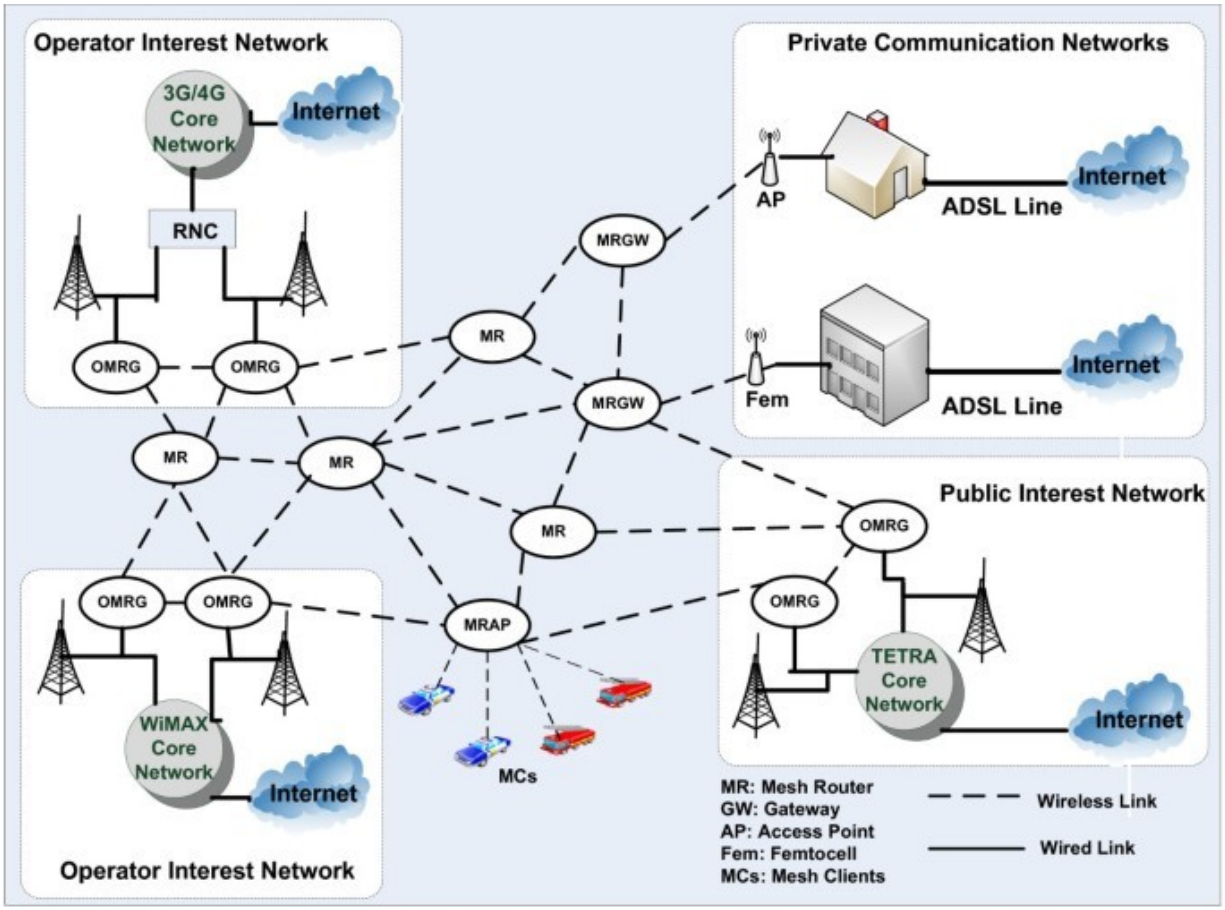

Figure 5: FPGA and Machine Learning-Based Disaster Supervision

It is essential to assess if success in this area has piqued the scientific community's attention. In the area of connectivity, FPGA (Field-programmable gate array) and behavioural factors, as well as the population in touch and the consequences of their plans, are being utilized for training people for public health emergencies.

3.3. Tabulation of Emergency Management of Network Public Opinion Events

The network makes it possible for public-sector crisis management to meet its goals. Any enterprise has set up a network information centre. The web and its networks are being built so that the network structure's performance, not just network management, is at its heart. As college and university management evolves in the internet age, new problems emerge. The management department paid little heed to how people acted during the Internet referendum crisis, which culminated in poor management, efficiency, interpersonal communication, and coordination.

Figure 6 illustrates the number of LUTs and flip-flops needed for FPGA emergency network public opinion case management due to the usage of 16-bit computers (Field programming gate array). As soon as the RTL implementation is complete, the machine will use the Xilinx Design Suite definition table. The need for and confusion of triggers and events creates a flow of symbolic meaning and mystery. In this scenario, the normal communication process has collapsed, and the device has become uncontrollable. The environmental remedy, as well as the general data release method, were all ruined or discarded. By providing a confounding and broad contact vacuum, the symbols' vague and nuanced meanings lead to the spread of knowledge.

Table 1: Analysis of Emergency Management of Network Public Opinion Events Based on FPGA (Field programming gate array).

S.NO	NUMBER OF COMMENTS WITH LABE	NUMBER OF UNITS	PERCENTAGE OF EFFICIENCY	NUMBER OF ERROR DETECTED
1	LABEL 1	26	1.8	19
2	LABEL 2	38	1.9	9
3	LABEL 3	46	2.8	7
4	LABEL 4	58	3.8	19
5	LABEL 5	68	3.7	21
6	LABEL 6	38	4.8	27

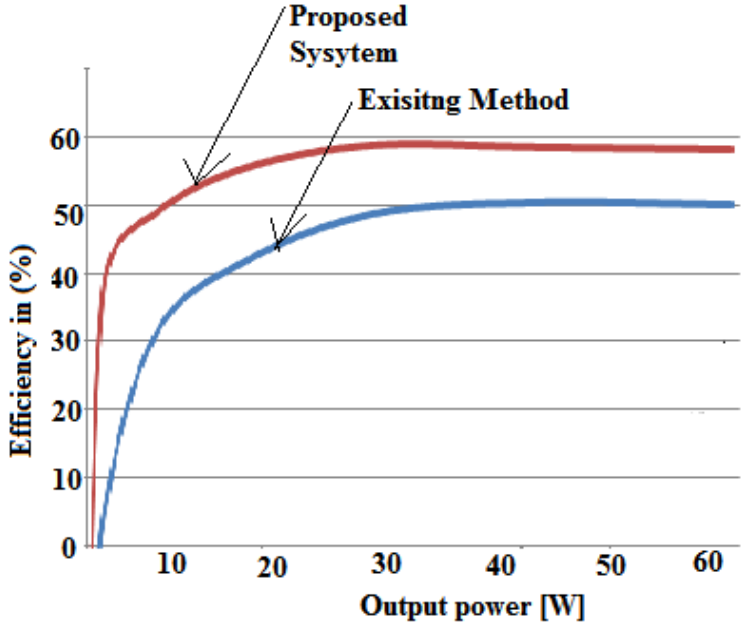

Figure 6: Analysis of FPGA (Field programming gate array)

4. CONCLUSION

On social media, irrational public opinion is a common occurrence. It's mostly about inciting an online crisis by expressing personal emotions, ideas, and opinions in general and social media. The power consumption of circuits on FPGA (Field programming gate array) and programmes can be determined by programming advanced FPGA (Field programming gate array) in software. As a result, the government must use crisis management and emergency network referendum legislation to monitor and enforce the network referendum. The network's primary goal is to safeguard and assess referendum control and rationality in emergencies.

References

[1] A. Alamsyah, W. Y. Rochmah and D. D. A. Nugroho, "Understanding Public Opinion towards New Sharing Economy Business Model Using Content Analysis". International Conference on Information Management and Technology (IMTECH).

[2] R. Bhavya, G.I. Archanaa, D. Karthika and D. Saravanan," Reflex Recognition of Tb Via Shade Duplicate Separation Built on Geometric Routine", International Journal of Pure and Applied Mathematics 119 (14), 831-836.
[3] X. Chen, M. Xia, J. Cheng, X. Tang and J. Zhang, "Trend prediction of internet public opinion based on collaborative filtering". International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery (ICNC-FSKD), (2016).
[4] R. Das, J. Kamruzzaman and G. Karmakar, "Exploiting Evolving Trust Relationships in the Modelling of Opinion Formation Dynamics in Online Social Networks". IEEE 31st International Conference on Advanced Information Networking and Applications (AINA), (2017).
[5] S. R. Etesami, S. Bolouki, "Influence of Conformist and Manipulative Behaviors on Public Opinion". IEEE Transactions on Control of Network Systems, (2018) .
[6] C. Fan, Y. Wu, J. Zhang and T. Zhao, "Research of public opinion hotspot detection model based on Web big data". IEEE International Conference on Network Infrastructure and Digital Content (IC-NIDC), (2016).
[7] Zh. Huifeng, "Research on the Dilemma of Earthquake Public Opinion Governance and Countermeasures of Scientific Guidance". International Conference on Wireless Communications and Smart Grid (ICWCSG), (2020).
[8] G. Kavitha, B. Saveen and N. Imtiaz, "Discovering Public Opinions by Performing Sentimental Analysis on Real Time Twitter Data". International Conference on Circuits and Systems in Digital Enterprise Technology (ICCSDET), (2018).
[9] A. D. Kononenko, V. L. Dashonok, K. A. Ivanova and D. T. Kassymova, "Approach to processing of data from social networks for detecting public opinion on the quality of educational services". IEEE International Conference on Soft Computing and Measurements. (2017).
[10] K. Kumar Singamaneni, G. Puthilibai, D. Saravanan, P. Sagaya Aurelia, P. Gopala Krishna and D.Stalindavid," An Effective Parkinson's Disease Prediction Using Logistic Decision Regression and Machine Learning with Big Data ", Turkish Journal of Physiotherapy and Rehabilitation; 32(3) ISSN 2651-4451 — e-ISSN 2651-446X, 778 – 786.
[11] S. Kumar Agarwal, E. Salis, K. Bommanna Raja, C. Karthikeyini, P. Shankar Gupta and D.Saravanan," Experience of Treating Covid-19 with Hydroxychloroquine and Azithromycin: New Delhi, India", Turkish Journal of Physiotherapy and Rehabilitation; 32(3) ISSN 2651-4451 — e-ISSN 2651-446X, 795-804.
[12] P. Lakshmi, D. StalinDavid, I. Kalaria, S. Jayadatta, A. Sharma and D. Saravanan," Research on Collaborative Innovation of E-Commerce Business Model for Commercial Transactions ", Turkish Journal of Physiotherapy and Rehabilitation; 32(3) ISSN 2651-4451 — e-ISSN 2651-446X, 787 – 794.
[13] Z. Lin, Z. Wang, L. Hong and X. Zhou, "Study on BBS public opinion spreading based on Social Network Analysis". 4th International Conference on Computer Science and Network Technology (ICCSNT), (2015).
[14] Y. Liu and Y. Zhang, "Research on the Governing Strategies for Internet Public Opinion Event under the New Media Environment". International Joint Conference on Information, Media and Engineering (ICIME). (2018).
[15] P. Liu, "Enterprise human resource management platform based on FPGA and Data mining" Microprocessors and Microsystems, (2020).
[16] U. Palani, D. Saravanan, R. Parthiban and S. Usharani," Lossy Node Elimination Based on Link Stability Algorithm in Wireless Sensor Network", International Journal of Recent Technology and Engineering (IJRTE), Volume 7, Issue 6S5.
[17] R. Parthiban, Dr.K. Santhosh Kumar, Dr. R. Sathya and D. Saravanan," A Secure Data Transmission And Effective Heart Disease Monitoring Scheme Using Mecc And Dlmnn In The Cloud With The Help Of Iot", International Journal of Grid and Distributed Computing, ISSN: 2005 – 4262, Vol. 13, No. 2, (2020) 834 – 856.
[18] R. Parthiban, R. Ezhilarasi and D. Saravanan, "Optical Character Recognition for English Handwritten Text Using Recurrent Neural Network", 2020 International Conference on System, Computation, Automation and Networking (ICSCAN-IEEE).
[19] R. Parthiban, V. Abarna, M. Banupriya, S. Keerthana and D. Saravanan, " Web Folder Phishing Discovery and Prevention with Customer Image Verification", 2020 International Conference on System, Computation, Automation and Networking (ICSCAN-IEEE).
[20] Q. Qiu, Research on the Evolution Law of Emergency Network Public Opinion, International Symposium on Computational Intelligence and Design, (2019).
[21] D. Raghu Raman, D. Saravanan and R. Nivedha , An Efficacious E-Portal for Rancher to Buy.
[22] D. Raghu Raman, S. Gowsalya Devi and D. Saravanan, "Locality based violation vigilant system using mobile application", 2020 International Conference on System, Computation, Automation and Networking (ICSCAN-IEEE).
[23] K. Rao Vaddempudi, G. Nageswara Rao, D. Saravanan, S. Sindhura, S. Gopa Kumar and D. Stalin David,"

Marine Area Remote Sensing Monitoring Withadvanced Flight Regulator and Self-Directed Regulator", Turkish Journal of Physiotherapy and Rehabilitation; 32(3) ISSN 2651-4451 — e-ISSN 2651-446X, Pages : 1584-1590.

[24] D. Saravanan, T. Rammohan, K. Aruna Kumari, D. Raghu Raman, A. Manoj Dhulekar and D. Stalin David," Using Machine Learning for Short-Term Extrapolation in Financial Forecast Based on Field-Programmable Gate Array", Turkish Journal of Physiotherapy and Rehabilitation; 32(3) ISSN 2651-4451 — e-ISSN 2651-446X, 1252-1260.

[25] D. Saravanan, J. Feroskhan, R. Parthiban and S. Usharani, "Secure Violent Detection in Android Application with Trust Analysis in Google Play", Journal of Physics: Conference Series 1717 (1), 012055.

[26] D. Saravanan, E. Racheal Anni Perianayaki, R. Pavithra and R. Parthiban," Barcode System for Hotel Food Order with Delivery Robot", Journal of Physics: Conference Series 1717 (1), 012054.

[27] D. Saravanan, R. Bhavya, GI. Archanaa, D. Karthika and R. Subban," Research on Detection of Mycobacterium Tuberculosis from Microscopic Sputum Smear Images Using Image Segmentation", 2017 IEEE International Conference on Computational Intelligence and Computing Research (ICCIC).

[28] D. Saravanan, R. Parthiban, U.Palani and S.G.Sandhya," Sheltered and Efficent Statistics Discrimnation for Cluster Based Wireless Antenna Networks", International Journal of Recent Technology and Engineering (IJRTE), Volume 7, Issue 6S5.

[29] D.Saravanan, Dr. K.Santhosh Kumar, R.Sathya and U.Palani, "An Iot Based Air Quality Monitoring And Air Pollutant Level Prediction System Using Machine Learning Approach – Dlmnn", International Journal of Future Generation Communication and Networking, Vol. 13, No. 4, (2020) 925–945.

[30] Seeds and Humus, International Journal of Recent Technology and Engineering (IJRTE), Volume-8, Issue-1S5, June (2019).

[31] P. Sikka, A. R. Asati and C. Shekhar, "Speed optimal FPGA implementation of the encryption algorithms for telecom applications". Microprocessors and Microsystems, 79, 103324.

[32] A. Singh Chouhan, N. Purohit, H. Annaiah, D. Saravanan, E. Fantin Irudaya Raj and D. Stalin David, A Real-Time Gesture Based Image Classification System with FPGAand Convolutional Neural Network. International Journal of Modern Agriculture, 10(2), (2021) 2565 - 2576. Retrieved from http://www.modern-journals.com/index.php/ijma/article/view/1064.

[33] D. Stalin David, G. Nageswara Rao, M. Swain, U. Sri Venkatesh, E. FantinIrudaya Raj and D. Saravanan," Inflammatory Syndrome Experiments Related with Covid-19", Turkish Journal of Physiotherapy and Rehabilitation; 32(3) ISSN 2651-4451 — e-ISSN 2651-446X, 765 – 768.

[34] D. Stalin David and D. Saravanan, 'Multi-perspective DOS Attack Detection Framework for Reliable Data Transmission in Wireless Sensor Networks based on Trust', International Journal of Future Generation Communication and Networking , Volume 13, Issue 4, (2020) 1522–1539.

[35] D. Stalin David and D. Saravanan , "Enhanced Glaucoma Detection Using Ensemble based CNN and Spatially Based Ellipse Fitting Curve Model", Solid State Technology, Volume 63, Issue 6, 3581-3598.

[36] D. Stalin David, M. Saravanan and A. Jayachandran, "Deep Convolutional Neural Network based Early Diagnosis of multi class brain tumour classification", Solid State Technology, Volume 63, Issue 6, PP.3599-3623.

[37] B. Viswanathan Krishna, G. Amuthavalli, D. StalinDavid, E. FantinIrudaya Raj, D. Saravanan, Certain Investigation of SARS-COVID-2-Induced Kawasaki-Like Disease in Indian Youngsters, (2021). Annals of the Romanian Society for Cell Biology, 1167–1182. Retrieved from https://www.annalsofrscb.ro/index.php/journal/article/view/4469.

[38] Wang, Q. Qiu "Topic analysis of Internet public opinion on natural disasters based on time division". International Conference on Advanced Electronic Materials, (2020).

[39] J. Wei and L. Zhang, Analysis of Information Dissemination Based on Emotional and the Evolution Life Cycle of Public Opinion. 2019 International Conference on Robots & Intelligent System (ICRIS), (2019).

[40] F. Yin, B. Zhang, B. Huang and L. Zhang, "A public opinion trend prediction method based on neural network algorithm". 2nd IEEE International Conference on Computational Intelligence and Applications (ICCIA), (2017).

[41] C. Yuan, H. Lin, X. Zhang and OPO, "Online public opinion analysis system over text streams", (2017).

[42] Q. Zhang, "Group decision model of internet public opinion emergency with the linguistic assessment". Chinese Control and Decision Conference (CCDC), (2016).

[43] C. Zhang, L. He, Y. Mao and B. Xiao, "Knowledge discovery of network public opinion in the concept of the smart city". IEEE 10th Conference on Industrial Electronics and Applications (ICIEA), (2015).

[44] M. Zheng, Y. Ma, A. Zheng and N. Wang, "Constructing Method of Public Opinion Knowledge Graph with Online News Comments", (2018) .