

# Machine Learning In Smart Technology Warehouses

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***Abstract: In this work using machine learning techniques for the sentiment analysis was observed. Sentiment analysis using unsupervised supervised and semi-supervised techniques are analyzed. Sentiment analysis has different types but using it with machine learning algorithms improves the overall results of the problem. The overall methods to eliminate the odd posts have analyzed the importance of the odd posts in the current era with an exponential increase of the data is explained. The social media applications are the major source of this huge data, and to remain such platforms secure to overcome odd posts issue, the requirement was to construct an approach to eliminate the odd posts. Overall, RNN produces high accuracy results, on the tweets data set in eliminating the odd posts from the tweets.***

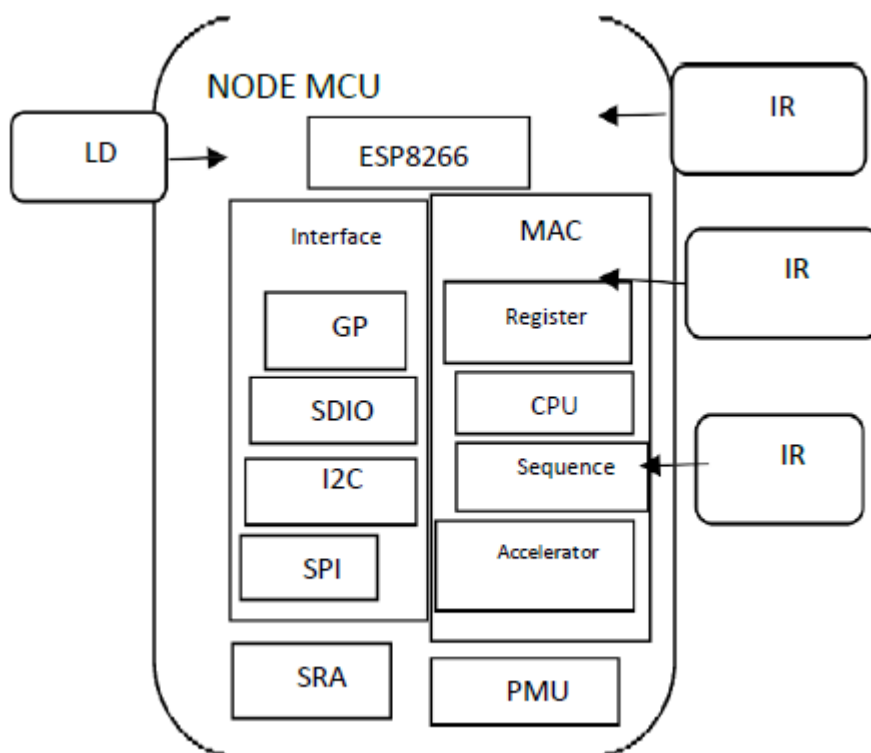
## 1. INTRODUCTION

Nowadays, more electrical energy is wasted by means of automated street lights. These kinds of street lights will switch on automatically when it is dark and switch off when it is bright. In other way it also works under some prescribed timings [1]. That means it will switch on when it reaches that particular time and automatically it will switch off when it reaches that allotted time. But it consumes more electrical energy and also some manual operations are needed. In order to reduce all these manual operations and more energy consuming we are focused on smart streetlights [2]. This smart street lights will work accordingly the moving objects. The street lights will be switch on only when there are any moving objects near to lights. Otherwise it will turn off. By this technique we can save energy and also reducing the manual operations. To determine the moving objects the sensor device must be used [3]. Both the sensor light and motion sensor can be used to turn on light and to detect moving objects respectively. So the street lights will be turned on for a while until the moving objects went far away. But in this technique we are facing one issue regarding that it will turn on only when the object come closer to light. This issue is in under process to sort out. Some centrally controlled Smart Street lights have been developed with the host computers by some colleges and universities [4]. In this paper, the main aim is to apply and evaluate the efficacy of Smart technology relative to its capacity to steer improvements in street light performance. (Abdul Jalil et al., 2021; Mohd Noh et al., 2021; Mustafa et al., 2021; Roszi et al., 2021; Tumisah et al., 2021). If it is managed well, various problems can be avoided (Irma et al., 2021; Suzana et al., 2021; Rohanida et al., 2021; Nazrah et al., 2021; Shahrulliza et al., 2021).

## 2. METHODOLOGY

Regarding the lamp unit, a motion is determined by motion sensors and it could be defined in the particular area which includes its own sensors lights. Then, it will broadcast the message to all other device. If there are no any movements in that particular area, it will turn off or it might be reduced power like making light to dim. In the sensor unit, it includes motion or moving sensor, controller and communication device. Only if there is any moving objects nearby that light area it will broadcast the message to all other units. MQTT protocol must be used to interconnect both the lamp unit and sensor unit. The major connectivity protocol in the field of IOT is MQTT and it is a machine to machine connectivity protocol. The main functionality behind this protocol is it can easily used in sending more messages to all other units. And also it is light weight model to be used effectively. It is broadly used in the remote areas where there is less number of connections which needs small network/bandwidth is used. Through the satellite link it will communicate with the broker who could be used in sensors. This communication takes place with the health care providers and that will be probably within the small range home automation and small devices.

## 3. RESULTS AND DISCUSSION



According to TatavarthySanthi Sri, in order to achieve the power utilization, smart street lights have been developed. Robotization is used to control the entire technique and also to reduce the manual operations. This is due to programmed frame works are well worked than the human framework [1]. So it is better to automate the street lights by the machine

framework and even smart road lights. The street lights turn off naturally when there is no movement of vehicles or even any humans [2].

According to ParkashTambare, a new design and execution of energy saving automated street lights has been developed. But they have focused mainly on energy saving and that could be determined absolutely by turning on the lights only when there is dark. Currently the street lights will be turn on at the prescribed time. But in this paper they developed the smart street light only when there is dark and not on prescribed time. The embedded system technology has been used and more sensor operations takes place in order to detect the moving objects and to turn on or off the lights. The timings to turn on and off can be controlled by the internet through the IOT technology. And also this technique may reduce the human operations [3].All aspects require effective leadership and management (Mohd Arafat et al., 2021; Sumaiyah et al., 2021; Hifzan et al., 2021; Shahrul et al., 2021; Helme et al., 2021).

This paper aims at making the street light to dim and brighter whenever it is needed. This particular technique is based on IOT and some sensors have been used to reduce more electricity consumption and also the manual operations. This paper is also focused on reducing the accidents and to provide a safe environment. According to M.PriyaDharsini, the street lights are not so efficient in saving the power so as to bring the necessity of developing the automated or smart street lights and that could be used more efficiently in developing nations. Parts of the light will be turned on in the entire street, parts of the light will be turned off. That means the light will be turn on and off only when there is moving objects [4]. The other parts of the light will not be turned on in the same street. Based on the number of vehicles and weather conditions the intensity of lights will be changed accordingly.The success of something depends on good and efficient management (Mohd Ali et al., 2021; Parimala et al., 2021; SitiJamilah et al., 2021; Nor Fauziyana et al., 2021; Noel et al., 2021). The best way is to do efficient management (Ahmad Shafarin et al., 2021; Junaidah et al., 2021; Farah Adibah et al., 2021; Ahmad Shakani et al., 2021; Muhamad Amin et al., 2021). This demonstrates that the importance of something being managed well (Santibuana et al., 2021; Nor Diana et al., 2021; Zarina et al., 2021; Khairul et al., 2021; Rohani et al., 2021; Badaruddin et al. , 2021, Abdul Rasid et al., 2021).

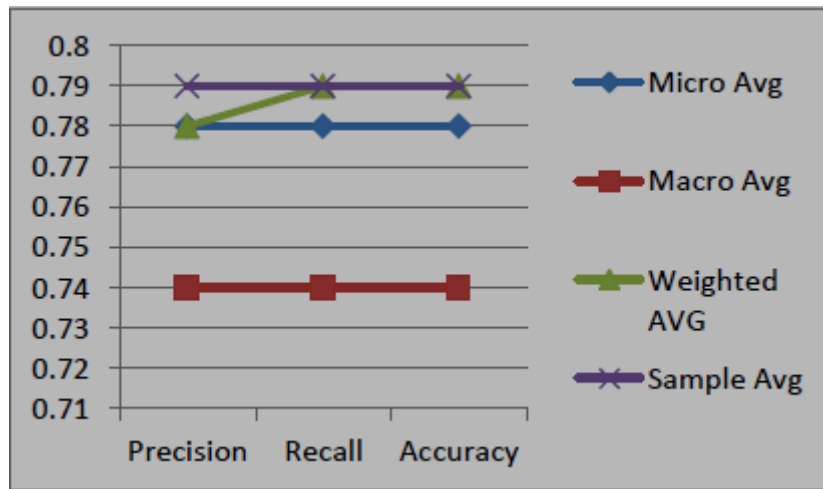
According to DongJin, centralized and remote technology will be enabled with the help of wireless networked LED lighting system has been used in this paper. In order to achieve a innovative smart city this smart street light system must be used. This will reduce the power consumption and also it will provide public safety. According to ChetnaBadgaiyan, based on wireless sensors network and pyro electric infra red sensors, an intelligent street lighting system has been introduced. This system can also be developed using zigbee device. The main goal of this paper is to develop a save power and to make street smart.

The exponential increase in the textual data, the huge issues regarding fair communication, arise in meanwhile machine learning plays its part, by developing such methods to analyze the textual data. The content requires fulfilling the term and remaining ethically strong enough to remain in a good category. However, this work explains to develop the dictionary or the vocabulary to help ease in detecting the odd words first. The current era and the coming era, directly belong to machine learning. As Bill Gates explained that machine learning may worth ten Microsoft, similarly, Tony Tether Director DARPA explains that machine learning will be next internet. The first spam post was carried out in 1978, as an email of digital marketing purposes, which is still the part of internet marketing. To eliminate the odd posts from the existing posts machine learning algorithms, techniques and models are playing a vital role.

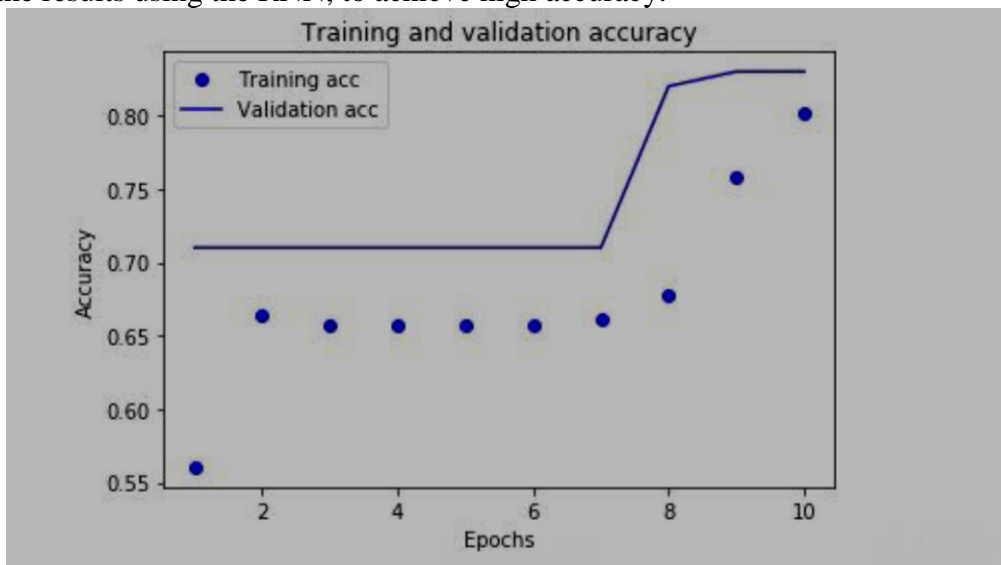
Furthermore, in this work, the analysis between different techniques to conclude a better solution to this problem is also observed. However, from the last two decades, the deep learning models using supervised techniques minimized this issue which is also observed in this work, but still, the problem requires eliminating. The regression models were used two decades before but from the last decade, the classification is also carried out, to eliminate the odd posts or the spam classification. In this survey, the different techniques were analyzed to check which techniques perform better than the other one. Previously the classification was done through some un-supervised and supervised models, now the deep learning neural language is taking place and classifying and producing the results more accurately. The most important techniques used to implement were concluded to eliminate the odd posts and the spam words used to initiate such posts helped in a learning problem. To eliminate the odd posts serious development methods require to integrate through the already developed systems to overcome, spam posts.

In-text sentiment analysis to eliminate the odd posts, sentiment analysis can use to classify the posts that it is an odd or a normal post. Sentiment analysis extracts the features from the data and develops a strong decision on the features extracted from the data (Petrucci, & Dragoni, 2018). There are different approaches to use sentiment analysis, like lexical analysis, hybrid approach and the machine learning approach. Using machine learning approach is the best way to have clear outputs, it is subdivided into different phases mainly supervised, unsupervised, and now semi-supervised techniques are also the part for the sentiment analysis using machine learning techniques. However, in this work, unsupervised, supervised and semi-supervised, sentiment analysis techniques are used and explained to obtain high-quality results to eliminate the odd posts (Recupero, Dragoni, Buscaldi, Alam, Cambria, Kessler, & STLlab, 2018). In the unsupervised machine learning approach, TF-IDF produces high-quality results, in semi-supervised techniques and linear approach SVM produces the best results, and using a supervised approach for the sentiment analysis the RNN approach to eliminate the odd posts, by extracting features is a better way to implement the analysis.

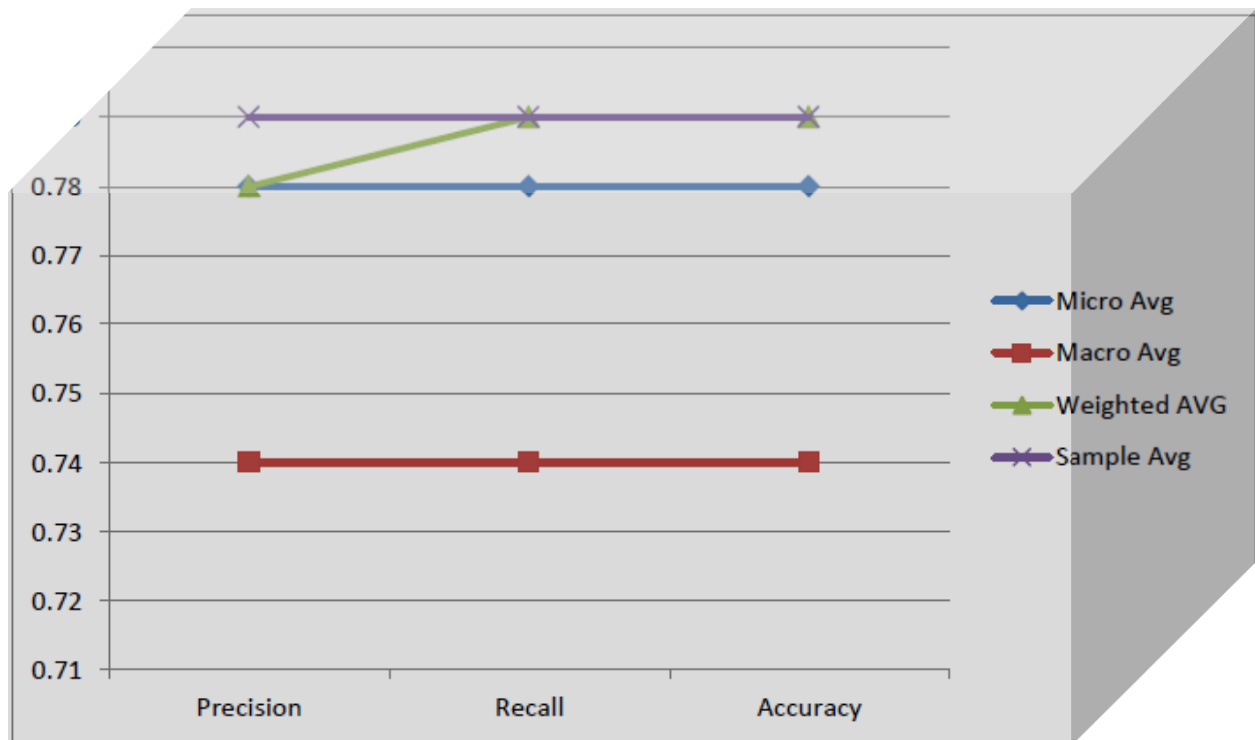
The result after applying the RNN, to the tweets dataset, the accuracy of the 78.68 percent is achieved. The results showed that high accuracy is obtained using the RNN (Evans, Jumper, Kirkpatrick, Sifre, Green, Qin & Petersen, 2018). The tweets were analyzed and results using RNN to identify the odd posts are observed and considered as a fast, and low-cost method to achieve high accuracy, this methodology may use in upcoming works regarding decision making, and classifying the data (Hu, Zhao, Guo, Cheng & Su, 2019). This model may further implemented on the large scale data set as well.



The model is trained to obtain accuracy using the dataset, the trained model improved the results, the training and validation accuracy is achieved. The trained model is applied to obtain the results using the RNN, to achieve high accuracy.



The RNN model is applied to the dataset to obtain the results and to improve the accuracy in identifying the odd posts. Moreover, in the figure here is the example of results that explains after applying the model to the data set the red sentences are odd posts and the green sentences present the normal posts.



After analyzing different techniques to eliminate the odd posts, different results were observed from the different techniques. To eliminate the odd posts from the small data set the tf-idf works properly (Zhang, Wang & Liu, 2018). Similarly, the support vector machine is used for the large data set and the RNN is used for the big data. Using the sentiment analysis and extracting the features from the machine learning approach the mentioned approaches are the far better solutions that obtain high results to eliminate the odd posts (Hu, Zhao, Guo, Cheng, & Su, 2019). RNN obtained high-end results after applying on the tweets to classify the data by eliminating the tweets as odd posts. This may lead to the other classification issues, and may use for the further problems regarding classification, and optimization of the system.

To improve the accuracy and to eliminate the odd posts, RNN is implemented to achieve the high accuracy. The elimination process of the odd posts, word embedding is used firstly using word2vec pre-processing is carried out. To eliminate the odd posts the data set of the tweets is introduced, in the preprocessing phase where the tokens are developed, removing the stop words is carried out, stemming of the data set is also done, and lemmatization for the valid lemmas is carried out. After the pre-processing of the tweets-dataset is lead to the feature extraction process, in this phase the features were extracted from the data, after extraction of features the selection of the process is carried out to eliminate the odd post using the classifier. The last stage of the processing is to classify the data and to eliminate the odd posts from the data. To classify the odd post classifier is used, the odd post classifier model is developed using RNN, and this technique is used to eliminate the odd posts to obtain high accuracy.

#### 4. CONCLUSION

In summary, this smart street light is mainly achieved in case of reducing power consumption and also to reduce the manual operations. This paper mainly focus on making the light to dim

or eve to bright with the help of sensors. The two sensors have been used motion sensor and light sensor. Motion sensor which is used to detect the objects and light sensors which is used to make the light to dim or brighter. Our future work may belongs to recording the motions nearby light and also intimating through message when there is any accident happens in that area.

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