EARLY PREDICTION OF PSYCHOLOGICAL RISK FACTORS OF ADDICTION TO SOCIAL MEDIA AMONG OLDER GENERATION USERS IN BANGLADESH

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project/internship titled **EARLY PREDICTION OF PSYCHOLOGICAL RISK FACTORS OF ADDICTION TO SOCIAL MEDIA AMONG OLDER GENERATION USERS IN BANGLADESH**, submitted by Md. Mahtab Uzz Zaman, ID No:173-15-10341, Sanjida Sabrin Shoshi, ID No:173-15-10341 and Nafiul Islam Nakib, ID No:173-15-10355 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 9-9-2021.

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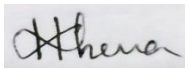

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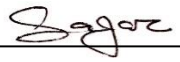

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ABSTRACT

The Internet made the whole world a village. We are very much dependent on the Internet. Bangladesh is moving towards becoming a digital country and the use of the Internet is becoming very much important. Most of our older generation is being introduced to the Internet a few years ago. Right now, social media is a sensation among them. They are using social media on daily basis and as we observe they are becoming addicted to social media. Though there are many studies on social media addiction in various groups of age there have been almost no studies conducted on the older generation's social media addiction. This problem is emerging in this short period of time. This social media sensation is increased in the pandemic of COVID-19 lockdown. In this thesis, we tried to make an early prediction of their addiction to social media. Firstly our intention is to collect some data from older people who use the internet then analyze the data that we have from them. Then after analyzing those data we take the help of some machine learning algorithms to predict their addiction level. Finally, we get the algorithm that gives the best accuracy for our result.

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Chapter 1

INTRODUCTION

1.1 Introduction

The Internet has become one essential need for us in this time. The world is bound to the internet. Most of the works cannot be done on the internet. Bangladesh is a third-world country, the internet is introduced to us late compare to other developed countries. But it's rapidly becoming essential to our daily life as the country is going towards digital everywhere possible. For the current government, making Bangladesh a digital country is a top priority. So, in that regards government is trying to make the internet easy to access for everybody in the country. Some years earlier internet was limited to computer but nowadays availability of smartphones, which can work almost as much as a computer or sometimes can do more work than a computer is making possible to reach internet every person's hand no matter how old they are. Children are learning how to use the internet from their textbooks or using the internet from a very early age. But the older generation is learning how to use the internet for 4-5 years and they are learning on their own. Which is creating multiple problems because they don't know the guideline for using the internet or how can the internet be useful for them or harmful for them. This is becoming a serious issue nowadays. The older generation is mostly using the internet for social media which is not very useful internet using if it's only compact to using social media. This is very addictive for them and as they are relatively new to using social media and they are becoming addicted to it. It can be very harmful to them, their family, society, and the country. Social media is not a very good source of information but this is becoming the only source of their information. In this research, we mined data from the older generation about their internet use and we made a model to predict how addictive the older generation is becoming to the internet and what are they using on the internet, and how much their addiction is going to affect their mentality and how this is going to affect the country as a whole.

1.2 Motivation

Five or six years before smartphones were expensive and the internet connection that telecom companies provided was not very good for smartphones. Most rural areas were not covered by at least a 3G network. Smartphones were popular at that time but not reached almost every person in the countryside. In the last five years, this scenario changed rapidly. Almost all of the countryside was covered by a 3G/4G network and smartphones have become cheaper and accessible for even people who live in rural areas. In this transition period, smartphones became popular to not just the younger generation but also the elder or older generation. This happened not only because smartphones can do many works but mostly by smartphones we can easily access the internet. Social media became very popular in the elder generation and many of them were using smartphones to only using some particularly social media apps. We observed the rapid transaction towards social media of the elder generation and we observed that most of them are becoming very addicted to social media. We also observed they do not participate in general social gatherings or extra curriculum activities they attended which they generally participated in before they were using social media. This is becoming worse when they are only using social media for their general information gathering and every news. They are becoming so much addicted to social media that if they see any news or any information on social media they are believing it. This can be very bad as much information in social media can be false leading. This is affecting their daily decision making for them and their family. This can be very devastating for our country's future because they mostly are heads of their family and if their decision is misleading by social media, it doesn't only harm them but their family, society, and country's future. We took all of these problems into our account and work towards this research.

1.3 Relational Of Study

Now a days most of people has smartphones. In last 4-5 years smartphones became essential to every generation. Although a smartphone is helpful but our older generation is having a smartphone mostly to use social media. Their attraction towards social media is very much like younger generation. This this going towards social media addiction which is going to have a huge impact on their thinking and their family and society. The paper is going to predict this psychological risk factor of social media in older generation's life.

1.4 Research Questions

In this research, we used a survey method for data collection. We choose questions that are related to our study and used Google Forms to collect online data collection and we used a manual form to collect data. Although all most of our subjects use smartphones and the internet, but they can only use some particular apps. For that reason, we had to collect much data manually to get a real view of our research and have a large collection of datasets. All the data were taken by anonymously.

- Does it show the accurate value to predict psychological risk factor in early prediction?
- Does it show social media impact in life of older generation by machine learning algorithm.

1.5 Expected Outcome

In this research our main subject was the older generation of Bangladesh who are involved in social media and internet. We are going to take data about their internet using and social media using. By studying those data we can predict their psychological risk factor of using social media and impact of social media in their life.

1.6 Layout of the Report

- Chapter 1 provided an overview of the study, including its motivation, research questions, and planned outcomes.
- The “Background” section of Chapter 2 will show the introduction, relevant works, research summary, and challenges.
- Research Methodology will be covered in Chapter 3.
- Chapter 4 will have Experimental Results and Discussion.
- Chapter 5 will have Summary and Conclusion.

CHAPTER 2

Background Study

2.1 Related Work

Nabila Ahmad, Tasnia Sharmin, Jesmin Akter , Rashedul Amin Tuhin, Amit Kumar Das proposed a CHI-SQUARE test for children internet user where result is Insignificant[1]. Cengiz ŞAHIN proposed SPSS 22 model to analysis data and result the results indicated that there is a negative relationship and moderate correlation between life satisfaction and social media addiction[2]. CECILIE SCHOU ANDREASSEN proposed PASW statistics, Version 18.0 and found result the RMSEA of the model was 0.05 (90%CI = 0.00, 0.08) and the CFI was .99[3]. ubo Hou, Dan Xiong, Tonglin Jiang, Lily Song, & Qi Wang proposed the 6-item Bergen Social Media Addiction Scale (BSMAS; Andreassen et al., 2017) to measure the participants' addictive use of social media and found result Cronbach's $\alpha = 0.81$[5]. Md. Azizul Hakim, Nusrat Jahan, Zannat Ara Zerin, Amena Begum Farha proposed RF algorithm for best features and found result of 96.50%[4].

2.2 Research Summary

In the following table, we showed a research summary which we reviewed. We reviewed many more but here we added some important one. In this table, we are showing the result of the research with the author's name and what algorithms they used for their research.

Table 2.2.1: Research Summary

Author	Algorithm	Result
Nabila Ahmad et al.	CHI-SQUARE	Insignificant
Cengiz ŞAHIN	SPSS 22	Negative relationship and moderate correlation.
CECILIE SCHOU ANDREASSEN	PASW statistics	CFI is 99

Ubo Hou et al.	BSMAS	Cronbach's α = 0.81.
Md. Azizul Hakim et al.	RF	Accuracy =96.50%.

2.3 Scope of the problem

Nowadays we can see that our older generations are getting more attracted by social media. Especially in this pandemic situation, their use of social media timing is increased. We know that all contents of social media are not real. But our older generation cannot understand that what content is real and what content is fake. Sometimes they click on some popup link then they go to the unreliable page and that popup link steals their personal data and information. Which is a very dangerous thing. Because the older generation has much important information on their phone. Their bank statements, their work information, etc. on their phone. Cause nowadays all work is digitalized. If a fraud circle can access their devices it is not only harmful to that person and their family it's also harmful for our society and economy. According to their age, they need to do exercise and practice their hobbies and spend their free time with family and friends. But for using social media they kill their free time on that and don't give the time for exercise, hobbies, and don't spend time with their family and friends. Even sometimes they use social media in their workplace between their work time. Because of that their real-life social bond is weakening day by day. Which is not good for our society. This social media attraction is also harmful to their health. It has an impact on their eyes, brains, and ears also. Cause they also use headphones for watching videos. So, to see all these conditions of our surrounded older generation people we got worried about it. That's why we are working on this topic and trying to predict that how much they are addicted to social media. So that we can know their addiction level and its impact on our society, country, and economy.

2.4 Challenges

To work on this unique topic we faced some challenges. But our biggest challenge that we faced is data collection. Because of working on the older generation, it's hard to collect their data by using Google Forms. We need to collect maximum data manually. In this pandemic situation, this was so hard to collect data manually. But we are trying our best to collect maximum data.

After collecting all data, another challenge was to process all data. We have 434 data . Data processing took many times. Because our all data are on sentences. So we need to convert it from sentence to numeric so that our machine learning algorithms can take those data as input.

Our last challenge was to select the best algorithm for our dataset. In lots of algorithms, it's very difficult to select the perfect algorithm for our data set. First of all, we chose some algorithms for our data set. Then we run all those algorithms. After that, we got the best algorithms for our dataset.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Subject and Instrumentation

The issue is primarily related to data mining. There are other domains, such as natural language processing, data preprocessing, data analysis, and Pearson correlation coefficient. The multiple domains can be thought of as subdomains, which adds to the problem's complexity and makes it more distinctive. The challenge can be handled in any native tongue that currently exists on the planet. However, our approach is limited to English. We chose English as our first language for a variety of reasons. In English, more tools, packages, algorithms, and even data sets are available than in any other language. It also raises the likelihood of a constructive solution to the problem. As a result, English is our selected language.

To solve this problem we used some algorithms in our methodology so that we can get the best result for our research. Those algorithms which we used in our methodology is described below:

3.1.1 Support Vector Machine (SVM)

SVM is a supervised linear & non-linear model for classification and regression problems. We maximize the margin of the classifier through these support vectors. The removal of support vectors changes the hyper ground position. These are the areas that enable us to construct our SVM.

$B0+(B1*X1) + (B2*X2) = 0$…..(1)

Here, this equation 1 describes the coefficients (B1 and B2) that decide the incline of the line and the capture (B0) are found by the learning calculation, and X1 and X2 are the two info factors.

3.1.2 Decision Tree (DT)

Decision Tree algorithm is part of the supervised research algorithms family. The algorithm of the decision tree may also be used to solve regression and classification issues, unlike other supervised learning methods. In Decision Trees, we begin from the tree root in order to forecast a class label for a record.

$E = \sum^{k}_{i=1} P_i \, log_2 P_t$ ….. (3)

Here, the equation 3 there k defines the number of classes of target attributes, Pi is the number of occurrences of class, i is divided by the total number of instances. This calculation is alluded to as " decision trees", yet on a few stages like R they are alluded to by the more present-day term CART.

3.1.3 Random Forest (RF)

Random forest (RF) is an ensemble classifier that uses different models from various DTS to improve prediction performance. It generates a large number of classification trees and uses a bootstrap sampling method to learn each tree from a training data set.

3.2 Data Collection Procedure

Since we are working on older generation's people so that we cannot take all the data through a google form. We had to collect maximum data manually. We collected data from our older family members, relatives, neighbors, our parents working place, some nearby offices, our teachers from all departments of our university. This was so hard to collect data manually from these lockdowns. Our research is based on a unique topic. Unique because there is a lot of research happening on social media addiction (younger generation, child addiction, teenager addiction). But there is no research on the older generation's addiction to social media. Our all collected data are authentic. We are tried to best to collect maximum data.

Table 3.2.1: Data Details

Serial No.	Type of Collecting Data	No. of Percentage (%)
1	Manually	61%
2	Using Google Form	39%

3.3 Proposed Methodology

In our proposed methodology here first of all we collected our data. Our all data are authentic. We collected our data manually and by using Google Forms. Then we processed our data with the help of an excel sheet. After that, we extract our data by using of Extra Tree algorithm. Then we work on our important features. we had 19 features but the Extra Tree algorithm showed us only 2 features as important. After that, we use some algorithms like SVM, DF, RF to classified our data and get the highest accuracy result for our research. In figure 3.4.1 we show the flow chart for our methodology.

3.3.1 Proposed Model

Here is a graphical model of our proposed methodology. This graphical model shows our whole work process for this research.

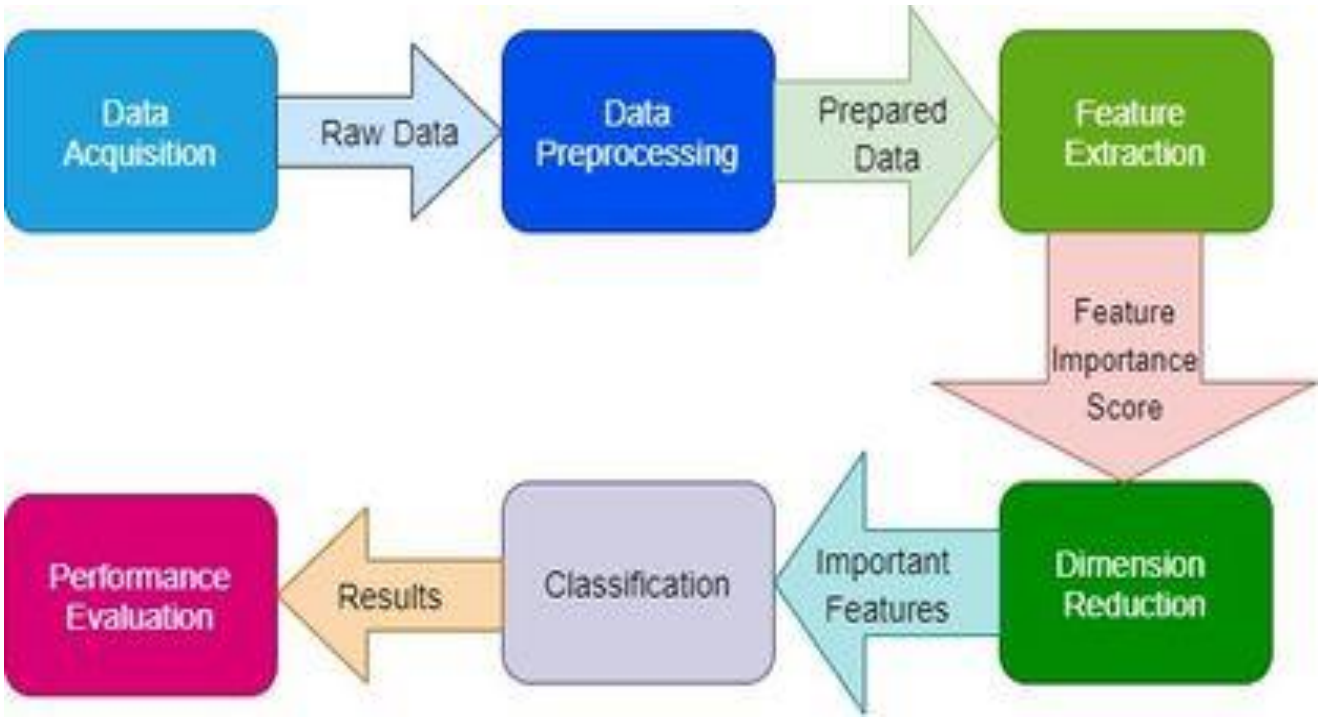

Fig:3.3.1 Proposed Model

3.3.2 Atributes Description

We have total 19 features for our research. But here we added important 14 features and their description. Table no 3.3.2 describes the attributes description.

3.3.3 Important Feature Selection

Here we compared all of our features by Adaptive boosting to see the importance our features. Here we can see that most important feature is “Time spend in social media’. After that we can see that second most important feature is “impact of social media in life”. Figure 3.3.2 shows comparison of different feature importance.

Table 3.3.2: Attributes Description

Serial	Name of the Feature	Feature Description
1.	Gender	Male, Female or Prefer not to say.

2.	Age	Age in range
3.	Educational qualification	Primary, SSC, HSC, Bachelor, Masters, PHD, Post-Doctorate
4.	Residential Area	Urban or Rural
5.	Professional background (part time or full time)	Government Employee, Nongovernment Employee, Business, Self-Employment, others
6.	Family type	Nuclear or Joint
7.	Types Of Earning member of your family	Primary, Secondary or others
8.	Leisure Period	Practicing Hobbies, Watching Tv, Watching dramas and movies, Physical exercise, Browse Internet, Spend time with family and friends
9.	Watch preference for TV	News, Entertainment Shows, Talk shows, Others
10.	Internet browsing (Yes or No)	Social Media (Facebook, YouTube, What's app, Imo, Instagram, Twitter etc.), Educational Websites, News, Entertainment Websites. (Netflix, Amazon prime, Bioscope etc.), Other Websites
11.	Spending time in social media	Hour in Range
12.	Video content for social media	News related videos, Educational videos, Motivational videos, Vlogs, Online business-related videos, Others.
13.	Post content for social media	Entertainment posts, News related posts, Educational posts, Motivational posts. Online business-related posts, Articles, Others
14.	Believe	Everything, Something, Nothing

15.	Empact of social media for decision making	Highly, Medium, Low
16.	Feelings for not able to browse social media	No Feelings, Medium Feelings, Feeling Anxiety

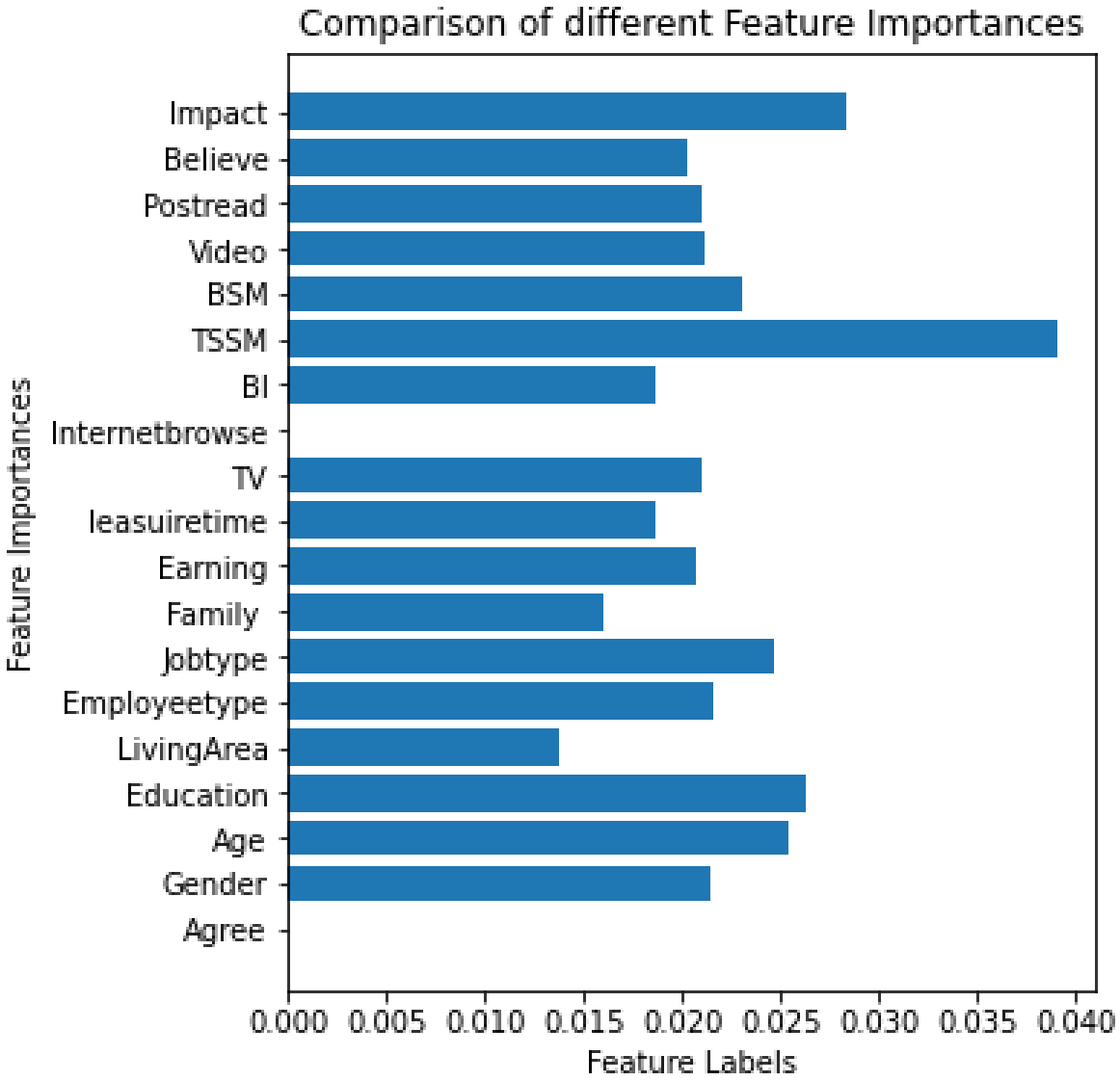

Figure 3.3.2: Comparison of different feature importance

CHAPTER 4

Experimental Results and Discussion

4.1 Experimental Setup

To measure the data set we used 19 features on three machine learning algorithms and got an accuracy of 95.38% in the RF algorithm. We mined the data directly from the subject and that's why our accuracy can be a little low on some algorithms but we got good accuracy when we used all of our features. The table showed the summarized classification result according to classification accuracy, recall, precision, F1-score, and kappa statistics.

4.2 Experimental results and analysis

We used authentic data but if we are using all of our features we are getting better result than important features. The table showed the summarized classification results for all features according to classification accuracy, recall, precision, F1-score, and kappa statistics.

The table showed the summarized classification results for all features according to classification accuracy, recall, precision, F1-score, and kappa statistics.

Table 4.2.1: Classification results for boosting using all features

Base Classifier	Accuracy (%)	Precision	Recall	F1-Score	Kappa
SVM	70.76%	0.707	0.707	0.707	0.514
DT	88.46%	0.884	0.884	0.884	0.816
RF	95.38%	0.953	0.953	0.953	0.923

The table showed the summarized classification results for important features according to classification accuracy, recall, precision, F1-score, and kappa statistics.

Table 4.2.2: Classification results for boosting using important feature

Base Classifier	Accuracy (%)	Precision	Recall	F1-Score	Kappa
SVM	61.53%	0.615	0.615	0.615	0.344
DT	76.92%	0.769	0.769	0.769	0.608
RF	70.76%	0.707	0.707	0.707	0.504

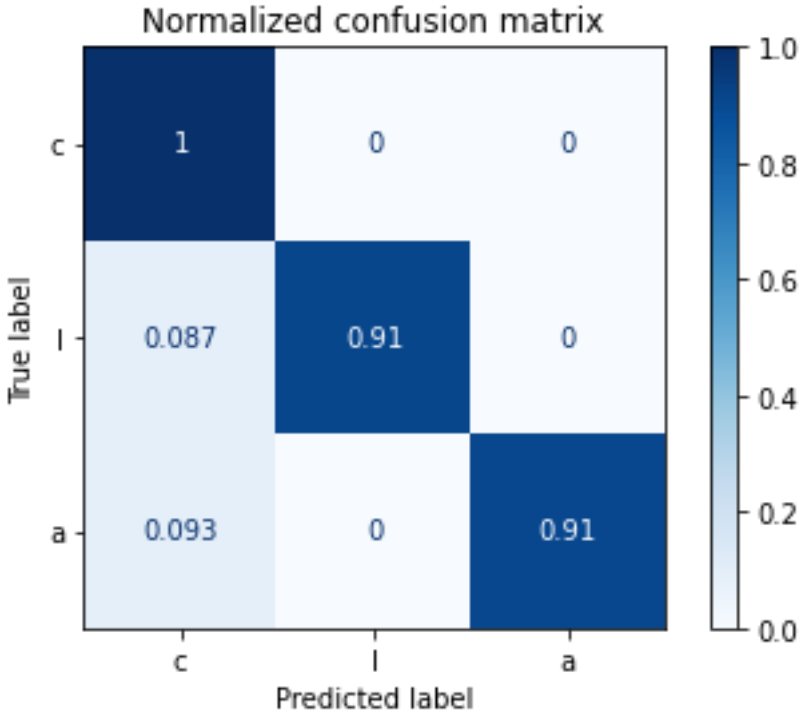

Figure 4.2.3: Normalized confusion matrix.

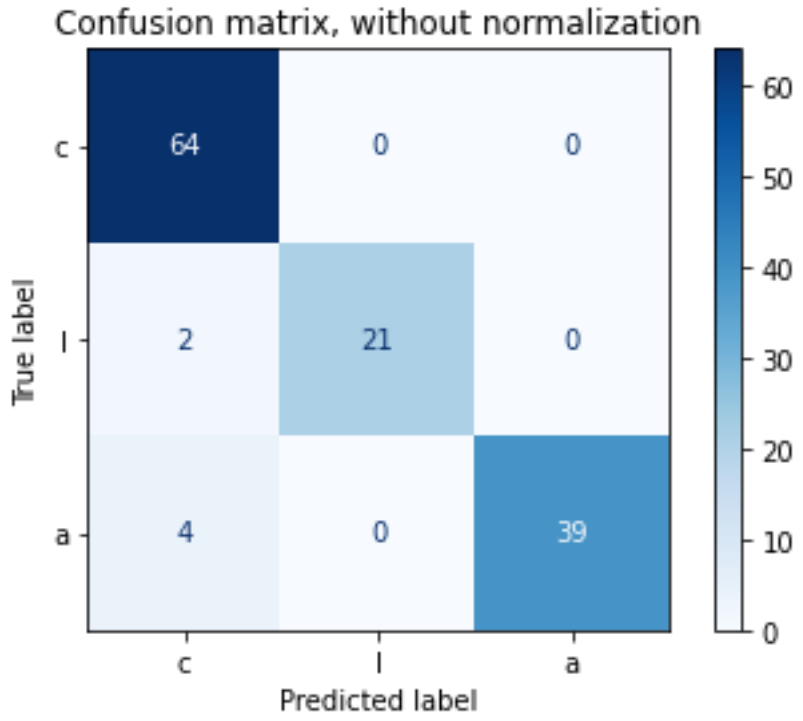

Figure 4.2.4: Confusion matrix, without normalization.

Here is our validation curve. Where training score is the yellow line and cross-validation score is the blue line.

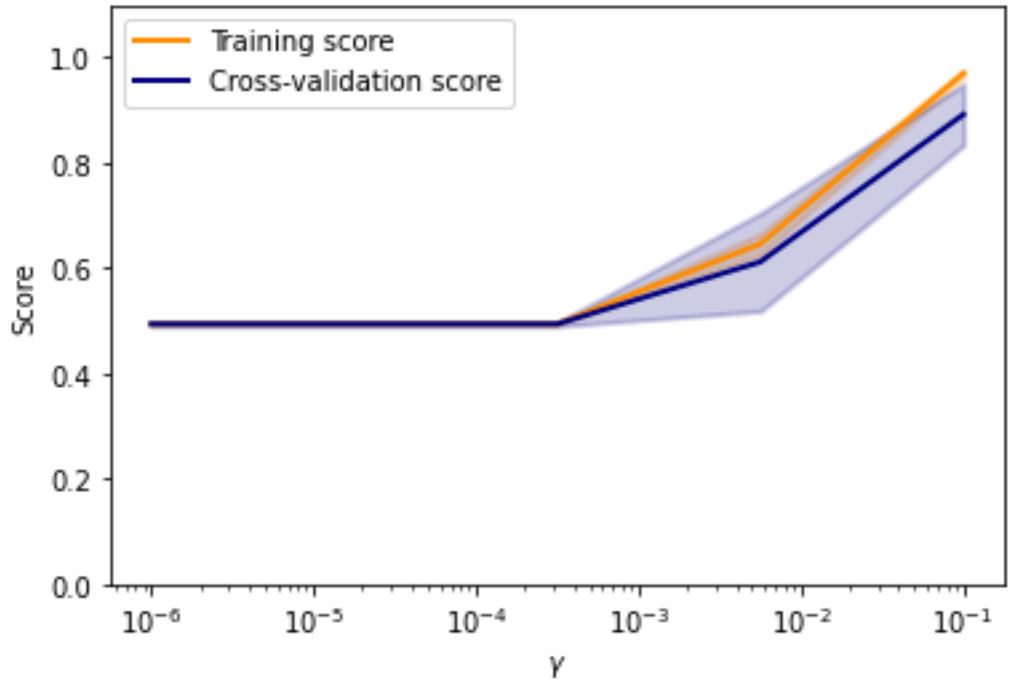

Figure 4.2.5: Validation curve.

4.3 Discussion

Following the preprocessing of the dataset, a model was developed utilizing several python packages and library functions to produce the solution of our domain problem. In the below fig 4.3.6 the working procedure of the model has been shown.

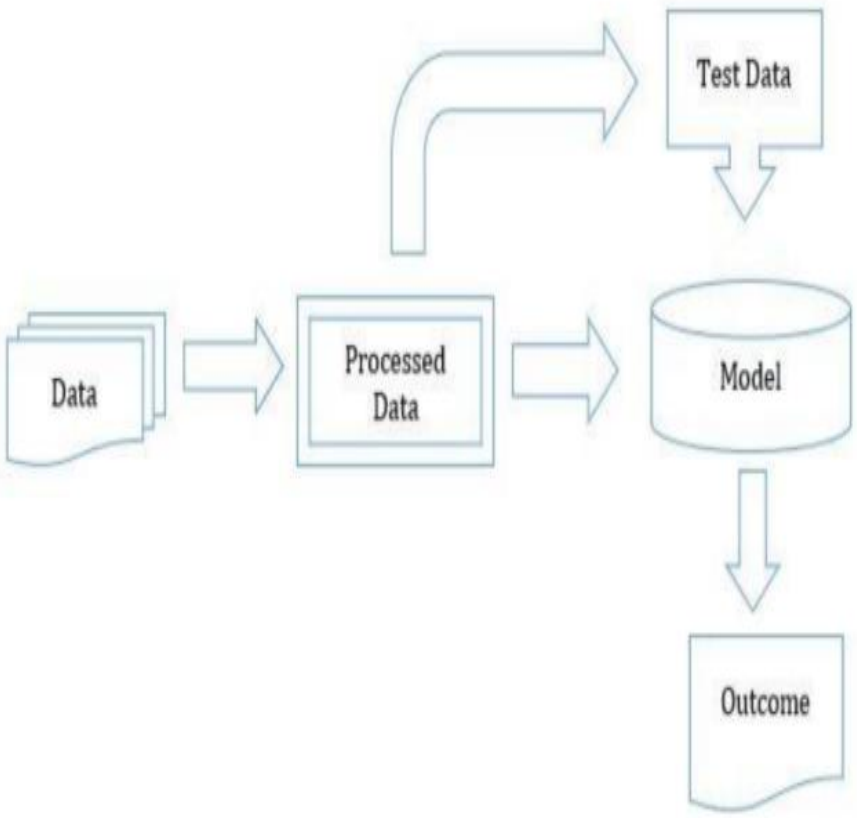

Figure 4.3.6: Whole process of finding outcome.

CHAPTER 5

Impact on Society and Sustainability

5.1 Impact on Society

Social media has made humans bolder. Society as a whole is affected when rumors are spread. A spate of killings over What's app, Instagram, Facebook, Twitter messages that were later found to be false. So, when the old generation using those social media they cannot understand what is wrong or right. while they using social media they often click some unwanted links and their account have been blocked or hacked by hackers. Because they are not well known about the security in social media.

5.2 Ethical Aspects

When they use social media to compare themselves to others, will be less happy. They often think about Their past lives what they did or how they can live better. They do some awkward things like when the new trends coming on social media. Social media has the potential to be an especially useful and effective tool to promote cultural exchange between us. It could shape our lives and what we do with them, but it all depends on how we frame our view. We need to be careful or teach them what is wrong or right in social media. Sometimes when fake people ask for help for money in their message so without a second thought they give them with a kind of heart. Sometimes making a prank call to them, hackers can easily access their bank and take all earning income of their whole life.

5.3 Sustainability Plan

we need to teach them about security issues on social media for the old generation use it properly and ethically may help them become a happier, smarter, and more connected person.

Chapter 6

Summary, Conclusion, Recommendation and Implication for Future Research

6.1 Summary of the Study

In the age of information technology, we have become very dependent on the ever-new inventions of technology. This is very normal. As these benefit us, on the contrary, they are currently leading us to harm. While the internet has spread all over Bangladesh, young children have become addicted to it. In addition to the benefits, they are using it in such a way that they are disrupting their livelihood, they are going the wrong way. One thing we have noticed by 2020-2021 is that at present young people and middle-aged or older people have become addicted to the internet. It is destroying our social system. It is not desirable for us at all. We working on it. I am currently researching middle-aged and older people to see how much their thinking has changed with the Internet and social media. We are researching how much they have thrown their thoughts into the reasoning for this social media. Through this research, we want to bring people of this age back to a healthy normal society. Of course, we need to know about the use of information technology, to use it for the good of the nation.

6.2 Conclusions

Through our research, we have tried to emphasize how much dependence middle-aged and elderly people had on the Internet. Through our research, middle-aged and older people will understand how addicted they are to social media and the internet. They have concentrated on almost everything from the decisions of their lives. A revolution after age will happen. This is the continuation of the age. We also have to keep pace at the same time. But day by day we are losing our identity and losing our personality by persuading others. So, we should keep our conscience and our family and society in order. From our research, we can learn our own identities. From this research, we will be able to work on how our thoughts are not at a risk.

6.3 Future Work

This is a relatively new study. There is almost no study exists related to social media addiction among the elder generation. We can find there is more scope to study on this further in future. We would like to find out how this addiction level went in our society and we like to make a further study about the figure of impact in our economy for social media addiction amongst the elder generation and how it can impact on politics in Bangladesh.

References

[1] Behavioral Issues of Children in Terms of Internet Usage Time in Bangladesh Nabila Ahmad1 , Tasnia Sharmin2 , Jesmin Akter3 , Rashedul Amin Tuhin4 , Amit Kumar Das5 Department of Computer Science Engineering, East West University, Dhaka, Bangladesh.

[2] The Predictive Level of Social Media Addiction for Life Satisfaction: A Study on University Students*Cengiz ŞAHIN Ahi Evran University, Kirsehir, Turkey.

[3] DEVELOPMENT OF A FACEBOOK ADDICTION SCALE CECILIE SCHOU ANDREASSEN Department of Psychosocial Science University of Bergen The Bergen Clinics Foundation, Norway.

[4] Performance Evaluation and Comparison of Ensemble Based Bagging and Boosting Machine Learning Methods for Automated Early Prediction of Myocardial InfarctionMd. Azizul Hakim, Nusrat Jahan, Zannat Ara Zerin, Amena Begum Farha Department of Computer Science and Engineering Daffodil International University, Dhaka, Bangladesh.

[5] Social media addiction: Its impact, mediation, and intervention. ubo Hou1, Dan Xiong1, 2, Tonglin Jiang1, 3, Lily Song4, & Qi Wang5.

[6] What is Mine is Yours: An Exploratory Study of Online Personal Privacy in the Socialist Republic of Vietnam," in Cyberculture Now, 2019. Patrick E. Sharbaugh and Phan Thi Le Trang.

[7] K. Young, "Understanding online gaming addiction and treatment issues for adolescents.Am. J. Fam. Ther., 2009.

[8] "Internet addiction in Korean adolescents and its relation to depression and suicidal ideation: A questionnaire survey," Int. J. Nurs. Stud., 2006.

[9] J. Sun, "Solving strategies research for the negative impact of computer technology on education," in 2nd International Workshop on Education Technology and Computer Science, ETCS 2010, 2010.

[10] C. Chiao and C. H. Chiu, "The relationships between ICT use and life quality among children with social phobia," in Proceedings of 2016 IEEE International Conference on Teaching, Assessment and Learning for Engineering, TALE 2016, 2017.

[11] T. H. I. Fakhouri, J. P. Hughes, D. J. Brody, B. K. Kit, and C. L. Ogden, "Physical activity and screen-time viewing among elementary school-aged children in the United States from 2009 to 2010," JAMA Pediatr., 2013.

[12] F. Tonioni et al., "Internet addiction: Hours spent online, behaviors and psychological symptoms," Gen. Hosp. Psychiatry, 2012.

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