



MEASURING MIDDLE AND OLD USERS SATISFACTION OF
SOCIAL MEDIA: A DESCRIPTIVE AND DECISION TREE
ANALYSIS

Submitted by

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APPROVAL

This Measuring Middle and Old users satisfaction of social media:A descriptive and decision tree analysis thesis is submitted by Md Nahed Hasan to the Department of Software Engineering, Daffodil International University, has been accepted as partial fulfillment of the requirements for the degree of Bachelor of Science and approved as to style contents.

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THESIS DECLARATION

I hereby declare that, this thesis report is done by me under the supervision of Dr. MD Imran Mahmud Assistant Professor & Associate Director (Research), Department of Software Engineering, Daffodil International University, in partial fulfillment my original work. I also declaring that neither this thesis nor any part therefore has been submitted else here for the award of Bachelor or any degree.

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ACKNOWLEDGMENT

All the praise to almighty God for bestowing us with the courage, knowledge, health and wisdom to carry out this thesis. We are greatly indebted to our parents, without their endless financial & moral support, patience and prayers this effort will be impossible. We would like to take this opportunity to express our gratitude to the following professionals of whom contributed to this project. Firstly, we would like to express our appreciation to our first academic supervisor, Dr. Md Imran Mahmud, Assistant Professor & Associate Director (Research), Department of SWE, Daffodil International University.

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ABSTRACT

Social media is playing a crucial role in humans's lives. This research explores however middle age and senior citizens use social media programs and also the association of this use on their overall amusement with life. We identified 46 items in seven life domains in 3 Bangladeshi region. Next, we collected survey data from 100 middle age and senior citizens over 45 years old to assess the impact of satisfaction from social media use competence on their domain life satisfaction and overall life contentment. The discovery suggest that the social media use activities fall into family, SNS use, social support, skills, and loneliness domains. Results demonstrate that lion's share of the elderly are encountering first-level digital divide. However, the paper likewise found that a few elderly social media users effectively take an interest in photograph and video sharing, social systems, web gatherings, and item surveys and appraisals. The discoveries propose that the conspicuous indicators of dynamic utilize/conduct of elderly on social media are affected by age, most elevated instructive fulfillment, and ability to claim and access innovation. These encourage social holding with their solid tie connections. To limited the elderly's advanced hole, a proactive position should be taken to plan technological and social structures to permit the up and coming age of the elderly to practice active ageing.

Keywords: Social Media, Active ageing , Life Satisfaction, elderly, digital divide.

CHAPTER 1

INTRODUCTION

In future, There are many countries will face a ripple in the older-adult population, known as an ageing society (UN World Population Ageing Report 2013).In this modern time the Average life expectancy, working capability of people have increase and depend more on themselves for individual wellbeing administration(OECD 2008).. Increasingly, information and communication technology (ICT) are acknowledged as significant tools to improve middle age and senior citizens' lives. They can perform various event through ICT like browse about healthcare information, make payments on their mobile phones by sitting on home, and stay connected with friends and family members ,live in scattered locations (Burke et al. 2010; Foverskov and Binder 2011; Pilotto et al. 2011). Many online activities like social gathering, online videogames have been designed to improve their health management and maintain their cognitive capability (Whitlock et al. 2012).

In the United States, social media use among those 65 and older reached 35% in 2015, more than triple since 2010 (Greenwood S et al 2016). In Australia, more and more older people have engaged to use the Internet for interpersonal communication, searching information, commerce and entertainment purpose (Sum S et al 2009). In China, older than 55 years Internet users have become a non-negligible community in China's online market (Michael D et al 2012)

The statistical data of Bangladesh describe the number of aged population has increased from 1.38 million to 7.59 million from the year of 1974-2001(Bangladesh Bureau of Statistics 2003). The Molecule family is increasing in Bangladesh day by day and older people left alone living separately from their family. This condition requests more wellbeing and welfare administrations and more arrangement to the elderly support(M. Nazrul Islam, Dilip C. Nath 2012, K.M. Mustafizur Rahman et al 2009).

There is not enough and specific data about the situation of middle age and elderly people on using internet,more specifically using social network in Bangladesh. This study focuses on the relationship of Social media and Life Satisfaction of middle age and elderly people of Bangladesh.

Our two research questions are:

- 1) How do senior citizens use social media to support everyday activities?
- 2) What is the influence of social media use on senior citizens' life satisfaction?

This study aimed to explore how older people manage SNS use and the impact of their life satisfaction by using SNS.

RESEARCH OBJECTIVE

- To examine the, environmental and behavioral factors influencing the continued use and non-use of social media of the Middle age and elderly in the Bangladesh.
- To uncover the potential of social media use as an enabler of ICT inclusion for Middle age and elderly in Bangladesh.
- Additional research objective: A decision tree approach to test middle aged and old people's life satisfaction in terms of Age, Gender, Education, Civil status, Using internet, Social Media Use per session, Social media use per session time, Motivational Access in the use of ICT.

CHAPTER 2

LITERATURE REVIEW

Table 2. 1:Table of Literature review

Author	Year	Paper type	Method	Limitation	Future research	Variables / keywords	Findings
Peter Ractham & Angsana Techatassanasontorn	2014	conference	This research follows a two-phased approach to first develop rich measures of social media use and relevant life domains. In the second phase, they used the social media use instrument from the first phase along with validated measures of overall and domain life satisfaction to examine the influence of social	This research was conducted in a single country context, thailand where data may be predisposed toward one specific culture.	Future research may consider conducting a comparative study across multiple countries.	Social Media, ICT for Social Innovation, Aging Society, Subjective Well-Being, Life Satisfaction	This research theorizes the influence of senior citizens' social media use on life satisfaction . Given the research goal, they identify how senior citizens use social media in their everyday life. There results show that senior citizens use social media to support everyday activities in

			media use on senior citizens' life satisfaction.				ten life domains.
Celeste J. Chan & Merlin Teodosia C. Suarez	2017	conference	This research study based on four basic requirements for a good ethical practice in dealing with the respondents, which are voluntary participation, informed consent, confidentiality, and the safety and security. The whole study was guided by the substantial perspective of SCT from the investigation, analysis, and findings.	This inquire about was coordinated in a solitary nation setting where data may be slanted toward one apparent culture.	this study direct to extend the findings of the elderly use of social media to other neighboring cities, as well as, municipalities in rural areas. it is also suggested to discover different impacts of social computing to the elderly population in their daily living and in achieving active ageing.	Active ageing, elderly, digital divide, social media, social cognitive theory	The paper concludes that the elderly use of social media is influenced by the bidirectional interactions of personal, environmental, and behavioral factors of SCT. Their active use/behavior of social media is influenced by their individual characteristics, specifically: age, highest educational attainment, and capacity to own and access

							technology are the obvious predictors.
Junjie Zhou	2018	Journal	they conducted an online survey in China that lasted eight weeks. Respondents were required to report their statistic attributes and sentiments with respect to SNS use. Data were analyzed using SPSS 20 and Amos 21	The sample representation is inadequate. The Internet experience of most respondents was more than one year. The sample in this paper are not an accurate representation of all older Internet users in China. they collected samples mainly from six different communities. These communities have different characteristics. They are not sure	Future research should pay more attention to sex differences when they examine older people's SNS use and try to cover greater diversity in age groups and examine the potential group differences. And also should try to examine the effects of community types on older people's life satisfactio	aged, personal satisfaction, sex characteristics, social media, social support.	Policymakers should offer support to SNSs targeting older people and encourage them to provide more useful services. SNS operators should encourage social support among older users and pay attention to sex differences and education differences.

				whether the community types could affect the results or not.	n.		
Antoni Barikdar & Tahera Ahmed & Shamima Parvin Lasker	2016	Journal	This study focuses on vulnerability about elderly people of Bangladesh. The major sources of information of this study were literature review. Literature review was done using different search engine e.g. Google scholar, online library PubMed between 1974 and 2015.	used qualitative tools for data collection but only qualitative findings are not sufficient for entire data analysis. For this it was needed to use quantitative data collection tools in this research	open opportunities for further research regarding elderly people such as study on indigenous people elderly people in Bangladesh	situation; elderly; ageing; Bangladesh; condition; world.	The root causes of vulnerability of elderly are medical, economical, emotional and social issues which are concerns not only for the individual or family, but also a concern for the community.

CHAPTER 3

METHODOLOGY

It is very difficult to conceptualize how social media support the life needs of different types of people including senior citizens. So we decide to go directly to our study stackholder senior citizens to explicate their social media use. we brief the overview to the respondent to ensure the nature and method of this study.

To evaluate the influence of social media use for the satisfaction, we used survey among the senior citizens. The survey is based on questions on the life domain variables of the social network user. Personal profile of the contestant, Social Media Use, Operational Skills to Use Social Media, Information and Strategic Skills to Use Social Media, SNS Usage, Loneliness, Social Support, Life Satisfaction these are the ground of the survey questionnaires. The survey form is adapted from a literature which contain the behavior of the social media use of a social media user (Junjie Zhou 2018) and (Celeste J. Chan & Merlin Teodosia C. Suarez 2017).

We focus on the group of retired professionals, civil servant, senior politicians, group of morning walk people, older family individuals. In this study we utilized the convenience sample (Onwuegbuzie Collins 2007) from the different part of Bangladesh. These senior individuals were invited and willing to answer the questions of the survey. This 10-15 minute questionnaire event was performed in different settings on presence and compatibility of the respondents. The interview was performed from last week of October 2018 to the last week of November.

We used a software package SPSS Statistics for statistical analysis. There were 100 volunteers who took part in the survey all are social media user. We set 45 years of age as a base and ensure that all the participants are whether going to enter into or already into elderly segment, of the age. Among all the participants, 85% male and 15% female. The dominance portion of the respondents are in the age group of 50-60 years old (58%), they are married (76%) and widowed (17%) Education qualification of large number of volunteers is Honour's (35%). The list of the elderly's profile is presented in Table 2 and Table 3.

3.1 EDUCATION

Table 3. 1: Table of Education qualification of the user

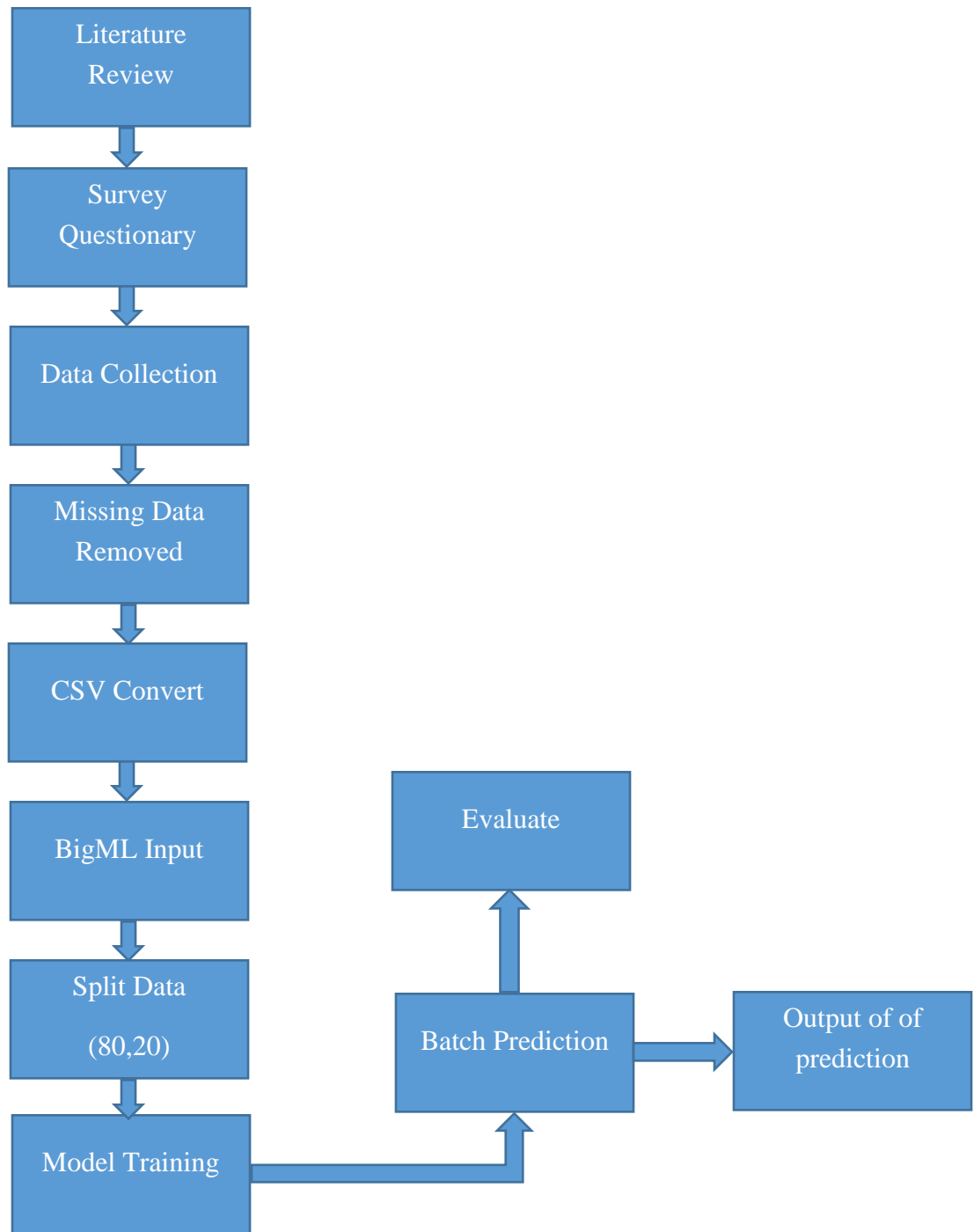
Education	Frequency	Percent(%)
Uneducated	11	11.0
SSC	14	14.0
PhD	2	2.0
Masters	13	13.0
HSC	25	25.0
Hons	35	35.0
Total	100	100.0

3.2 CIVIL STATUS

Table 3. 2: Table of Civil status of the user

Civil Status	Frequency	Percent(%)
Married	76	76.0
Separated	4	4.0
Single	3	3.0
Widow/widower	17	17.0
Total	100	100.0

3.3 ADDITIONAL RESEARCH PROCESS



CHAPTER 4

RESULT, ANALYSIS AND DISCUSSION

4.1 SOCIAL MEDIA USE WITH AND USE PER SESSION

This study evaluate that meajority of the eldarly user use smartphone(77%), Computer and Smartphone(9%), Tablet (6%) to use social media. Most of the user use social media 1-5 times per day(52%), A few times a week(33%).

Table 4. 1: Table of Frequency of social media use.

Social media use with	Frequency	Percent
Tablet	6	6.0
Smartphone, Tablet	3	3.0
Smartphone	77	77.0
Computer, Smartphone, Tablet	1	1.0
Computer, Smartphone	9	9.0
Computer	4	4.0
Total	100	100.0

Table 4. 2: Table of Frequency of Social media use of the elderly.

Social media use per session	Frequency	Percent
1-5 times per day	52	52.0
6-10 times per day	9	9.0
A few times a week	33	33.0
Less than once a week	2	2.0
More then 10 times per day	4	4.0
Total	100	100.0

According to the respondent elderly, based on social media use per session a large percentage of the user (52%) use social media 1-5 times per day. Also 33% of the user use social

media a few times week.The percentage is very low about using social media less than once a week or more then 10 times per day.

Table 4. 3: Table of Social media use per session respect with education qualification.

Education	Social_Media_Use_per_session					Total
	1-5 times per day	6-10 times per day	A few times a week	Less than once a week	More then 10 times per day	
Uneducated	6	1	3	0	1	11
SSC	7	1	5	1	0	14
PhD	1	0	0	0	1	2
Masters	8	3	2	0	0	13
HSC	12	0	11	1	1	25
Hons	18	4	12	0	1	35
Total	52	9	33	2	4	100

Calculation of the Frequency of Social media use per session respect with education qualification.It shows that the 34.61% user use social media 1-5 times per day and 36.36% user use social media A few times a week with Honour’s education qualification.Also 23.07% user use social media 1-5 times per day And 33.33% A few times a week with HSC education qualification.On the other side 15.38% user use social media 1-5 times per day with Masters education qualification.Also 13.46% user use social media 1-5 times per day And 15.15% A few times a week with SSC education qualification.User use social media 1-5 times per day 11.54% And 9.09% user use social media A few times a week who are uneducated.

Table 4. 4: Table of Social media use per session respect with gender.

Gender		Social_Media_Use_per_session					Total
		1-5 times per day	6-10 times per day	A few times a week	Less than once a week	More than 10 times per day	
	male	45	7	28	2	3	85
	female	7	2	5	0	1	15
Total		52	9	33	2	4	100

According to our study analysis 45 male(52.9%) use social media 1-5 times per day,8.2% user use 6-10 times per day and 32.9% a few times a week.On the other hand 7 female (46.7%) 1-5 times per day,13.3% 6-10 times per day and 33.3% user use a few times a week use social media.

4.2 SOCIAL MEDIA USE PER SESSION TIME

Table 4. 5: Table of Frequency of Social media use per session time of the elderly.

Social media use per session time	Frequency	Percent
Between 10-30 mins	67	67.0
Between 30-60 mins	29	29.0
Between 60-120 mins	2	2.0
Less than 10 mins	2	2.0
Total	100	100.0

The frame of the time of using social media Between 30-60 mins is 29%. Most of them 67% active in online from 10-30 minutes because of suffering of poor eyesight and arm fatigue. Social media use per session time between 60-120 mins and less than 10 mins,2% user use for the both.

Table 4. 6: Table of social media use per session time respect with education

Education		Social_media_use_per_session_time				Total
		Between 10-30 mins	Between 30-60 mins	Between 60-120 mins	Less than 10 mins	
	Uneducated	8	1	1	1	11
	SSC	6	8	0	0	14
	PhD	2	0	0	0	2
	Masters	9	3	1	0	13
	HSC	15	9	0	1	25
	Hons	27	8	0	0	35
Total		67	29	2	2	100

The social media use per session time respect with education, 40.29% of the user who use social media Between 10-30 mins per session is Honour's qualified and the 22.38% of the user are HSC. we discover that between 10-30 min per session 11.94% of user are uneducated. 27.59% elderly use social media Between 30-60 mins per session with SSC qualification. Between 30-60 mins per session use 31.03% are HSC qualified, 27.58% Honour's qualified.

Table 4. 7: Table of social media use per session time respect with gender

Gender		Social_media_use_per_session_time				Total
		Between 10-30 mins	Between 30-60 mins	Between 60-120 mins	Less than 10 mins	
	male	59	24	2	0	85
	female	8	5	0	2	15
Total		67	29	2	2	100

Among the Male elderly,69.411% of them use social media between 10-30 mins per session and 28.23% use Between 30-60 mins,rest of them use social media between 60-120 mins.For Female 53.33% use between 10-30 mins per session and 33.33% use Between 30-60 mins.

4.3 MOTIVATIONAL ACCESS IN THE USE OF ICT

We try to to find the basic Motivational Access in the use of ICT and serve some option like Self expression,Organizing activities,Obtaining and shareing information,For entertainment,Keep in touch with family and friends,Finding new relationship online to the elderly user of the social network.After analysis it shows that most of the elderly is voluntary to use social media for Obtaining and shareing information(29%), Self expression(15%), Self expression and Obtaining and shareing information(15%), For entertainment(15%), Keep in touch with family and friends(9%),Organizing activities and Obtaining and shareing information(5%).

Table 4. 8: Table of Motivational Access in the use of ICT

Motivational Access in the use of ICT	Frequency	Percent(%)
Self expression, Obtaining and shareing information, Keep in touch with family and friends	4	4.0
Self expression, Obtaining and shareing information	15	15.0
Self expression, Keep in touch with family and friends	1	1.0
Self expression	15	15.0
Organizing activities, Obtaining and shareing information	5	5.0
Organizing activities, Keep in touch with family and friends	2	2.0
Organizing activities	1	1.0
Obtaining and shareing information, Keep in touch with family and friends	3	3.0
Obtaining and shareing information	29	29.0
Keep in touch with family and friends	9	9.0
For entertainment	15	15.0
Finding new relationship online	1	1.0
Total	100	100.0

4.4 OPERATIONAL SKILLS TO USE SOCIAL MEDIA

A attitude towards an activity is an indicator of conduct aim which will prompt use of the technology (Ngai et al. 2015). The discoveries demonstrate the elderly discover the utilization of social networking to be great. Measures for behavioral control demonstrate that active elderly clients of social media are encountering full control in investigating the virtual condition. They don't hesitate to utilize the ICT device and they have full control since they have the essential means and assets. Conduct control is a deciding component behind the elderly's activity to utilize the social media. It shows that if the elderly holds solid control to the necessities to use the social media, at that point the individual will have high seen command over the continued utilization of the technology. This can likewise be clarified by the individual direct agency practiced by a person in the use of the technology.

Table 4. 9: Table of Operational Skills to Use Social Media

(Low extent 1 2 3 4 5 High extent)

Operational Skills to Use Social Media	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Total (%)
I start up, shut down, and sleep/stand computer or tablet.	35	17	22	10	16	100
I connect to a wi-fi for internet connection	17	13	24	18	28	100
I start/open a web browser	9	9	17	29	36	100
I log in/log out social media site	13	4	14	33	36	100
I set maximize,minimize,resize,close windows on screen	36	23	22	9	10	100
I save text/audio/video/image files onto a secondary storage	10	5	29	21	35	100
I delete text/audio/video/image files	14	6	29	17	34	100
I install application software or device driver	29	27	32	5	7	100
I use shortcut keys	23	28	34	5	10	100

Digital skill is one of the access to new media, one’s capability to operate a computer, smartphone, and use the internet. Results revealed a large number of user asked for help to start,shutdown and stand computer or table and set maximize,minimize,resize,close windows on screen .Prominent number of the user can connect internet connection and open browser and do log in-log out by their own with high extent.The eminent number of elderly user can save and delete files to secondary storage and use shortcut key with medium extent.Huge number of them with low extent manage windows on screen and install application software or device drive.

4.5 INFORMATION AND STRATEGIC SKILLS TO USE SOCIAL MEDIA

Table 4. 10: Table of Information and Strategic Skills to Use Social Media

(Low extent 1 2 3 4 5 High extent)

Information and Strategic Skills to Use Social Media	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Total (%)
Expert Search	36	9	23	17	15	100
Communication	1	12	36	31	20	100
Social Connection	2	9	36	28	25	100
Content Sharing	8	6	24	28	34	100
Identity	27	33	19	12	9	100
Presence	24	29	27	13	7	100

Information and strategic skills is also a kind of access to new media is digital skill. Operation like “content sharing” was practiced by the elderly user with high extent. The degree of utilization to the functional building blocks of social media like: “expert search”, “communication”, and “social connection” were performed by the elderly with moderate extent. Activities like “identity”, and “presence” were practiced with low extent.

4.6 SNS USAGE

Table 4. 11: Table of SNS Usage to Use Social Media

SNS Usage	(Strongly Disagree 1 2 3 4 5 Strongly Agree)					Total (%)
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	
I frequently participate in the activities in this site	15	11	37	16	21	100
I usually spend a lot of time on conducting the activities in this site	27	28	30	10	5	100
When participating in this site, I usually actively interact with others	17	35	38	4	6	100
When discussing a complicated issue, I am usually involved in the subsequent interactions	22	31	33	6	8	100
I usually involve myself in discussions of various topics rather than specific topics	27	33	19	11	8	100

SNS usage explain that a great number of user frequently participate in the activites,actively interact with others, involved in the subsequent interactions and involve various topic discussion with moderate agreeness.

4.7 LONELINESS

Table 4. 12: Table of Loneliness to Use Social Media

(Strongly Disagree 1 2 3 4 5 Strongly Agree)

Loneliness	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Total (%)
I lack companionship	31	29	29	8	3	100
I am unhappy being so withdrawn	33	20	20	19	8	100
There are people I can turn to	12	16	57	10	5	100
I feel alone	36	23	27	13	1	100
I feel left out	35	30	26	7	2	100
I feel isolated from others	39	30	20	11	0	100
My social relationships are superficial	43	7	16	30	4	100
I would describe myself as lonely	37	26	27	9	1	100
I feel I am no longer close to anybody	33	25	28	13	1	100
I feel no one really knows me well	26	26	33	11	4	100
People are around me but not with me	28	17	32	11	12	100
There are people I can talk to	2	11	48	14	25	100

Loneliness is one of the important fact to use social media of elderly user. But the study inform us that a huge number of elderly 31% are strongly disagree about their social media use for lack companionship, 36% are strongly disagree about their social media use for feel along or 35% are strongly disagree about their social media use for feel left out. Some number of them 43% are strongly disagree with us that their social relationships are superficial, 32% elderly somehow agree about their social media use for People are around them but not with them. 48% respondent somehow agree about their social media use for there are people they can talk .

4.8 SOCIAL SUPPORT

Table 4. 13: Table of Social Support to Use Social Media

(Strongly Disagree 1 2 3 4 5 Strongly Agree)

Social Support	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Total (%)
Other family members understand the way feel about things	4	8	32	36	20	100
I can rely on family member if I have a serious problem	5	4	9	40	42	100
I can open up to my family members if I need to talk about my worries	3	6	7	47	37	100
My friends understand the way I feel about things	2	10	51	24	13	100
I can rely on my friends if I have a serious problem	7	8	31	30	24	100
I can open up to my friends if I need to talk about my worries	5	8	38	26	23	100

The elderly social media user inform us that their family members understand their feeling,can rely if there is any serious problem or need to talk about worries with strongly agreeness.they somehow agree that friends understand their feelings and can talke about any serious problem or worries.The 36% of the user agree Other family members understand the way they feel about things.42% of the user strongly agree that can rely on family member if they have a serious problem.About friends 51% of them somehow agree that their friends understand the way they feel about things.

4.9 ELDERLY SATISFACTION ANALYSIS

Table 4. 14: Table of Life Satisfaction to Use Social Media

(Strongly Disagree 1 2 3 4 5 Strongly Agree)

Life Satisfaction	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Total (%)
In most ways, my life is close to my ideal	6	14	50	19	11	100
The conditions of my life are excellent	1	25	36	24	14	100
I am satisfied with my life	1	26	38	11	24	100
So far I have gotten the important things I want in life	3	34	38	11	14	100
If I could live my life over, I would change almost nothing	19	33	28	9	11	100

Table 4. 15: Table of satisfaction according to gender

Gender		SNS		Total
		Yes	No	
	male	67	18	85
	female	13	2	15
Total		80	20	100

This findings evaluate that 80% of the total user is satisfied with social network where 83.75% is male and 16.25% is female user.Parallally 20% of the total user is not satisfied with social network where 90% is male and 10% is female user.In the satisfied user 33.8% Honour's,25% HSC,12.5% SSC,12.5% Uneducated and 2.5% PhD qualified.On the other hand among the unsatisfied user 40% Honour's,25% HSC,20% SSC,5% Uneducated and 0% PhD qualified.

Table 4. 16: Table of satisfaction according to education qualification

Education	SNS		Total
	Yes	No	
Uneducated	10	1	11
SSC	10	4	14
PhD	2	0	2
Masters	11	2	13
HSC	20	5	25
Hons	27	8	35
Total	80	20	100

Table 4. 17: Table of satisfaction according to social media use per session

Social_Media_Use_ per_session	SNS		Total
	Yes	No	
1-5 times per day	45	7	52
6-10 times per day	6	3	9
A few times a week	24	9	33
Less than once a week	1	1	2
More then 10 times per day	4	0	4
Total	80	20	100

Those elderly who use social media 1-5 times per day 86.5% are satisfied, 6-10 times per day 66.7%, A few times a week 72.7%, Less than once a week 50.0%, More then 10 times per day 100.0% are satisfied.

Table 4. 18: Table of satisfaction according to Motivational Access in the use of ICT

Motivational Access in the use of ICT	SNS		Total
	Yes	No	
Self expression, Obtaining and shareing information, Keep in touch with family and friends	4	0	4
Self expression, Obtaining and shareing information	9	6	15
Self expression, Keep in touch with family and friends	1	0	1
Self expression	12	3	15
Organizing activities, Obtaining and shareing information	5	0	5
Organizing activities, Keep in touch with family and friends	2	0	2
Organizing activities	1	0	1
Obtaining and shareing information, Keep in touch with family and friends	2	1	3
Obtaining and shareing information	21	8	29

	Keep in touch with family and friends	8	1	9
	For entertainment	14	1	15
	Finding new relationship online	1	0	1
Total		80	20	100

Elderly who use social media for self expression and obtaining and sharing information 60% of them are satisfied. For Self expression 80.0% of them, for Obtaining and sharing information and Keep in touch with family and friends 66.7% of them, for Obtaining and sharing information 72.4% of them, for Keep in touch with family and friends 88.9% of them, and For entertainment 93.3% of them are satisfied.

4.10 MODEL SUMMARY

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.642 ^a	.412	.400	.65600
a. Predictors: (Constant), mean_social_support, mean_loneliness				

Loneliness and social support explains 41% satisfaction of SNS use.

4.11 BIGML ANALYSIS

BigML is a Comprehensive Machine Learning Platform. It provides a selection of robustly-engineered Machine Learning algorithms proven to solve real world problems by applying a single, standardized framework. We use BigML to analyze our survey data and generate a decision tree.

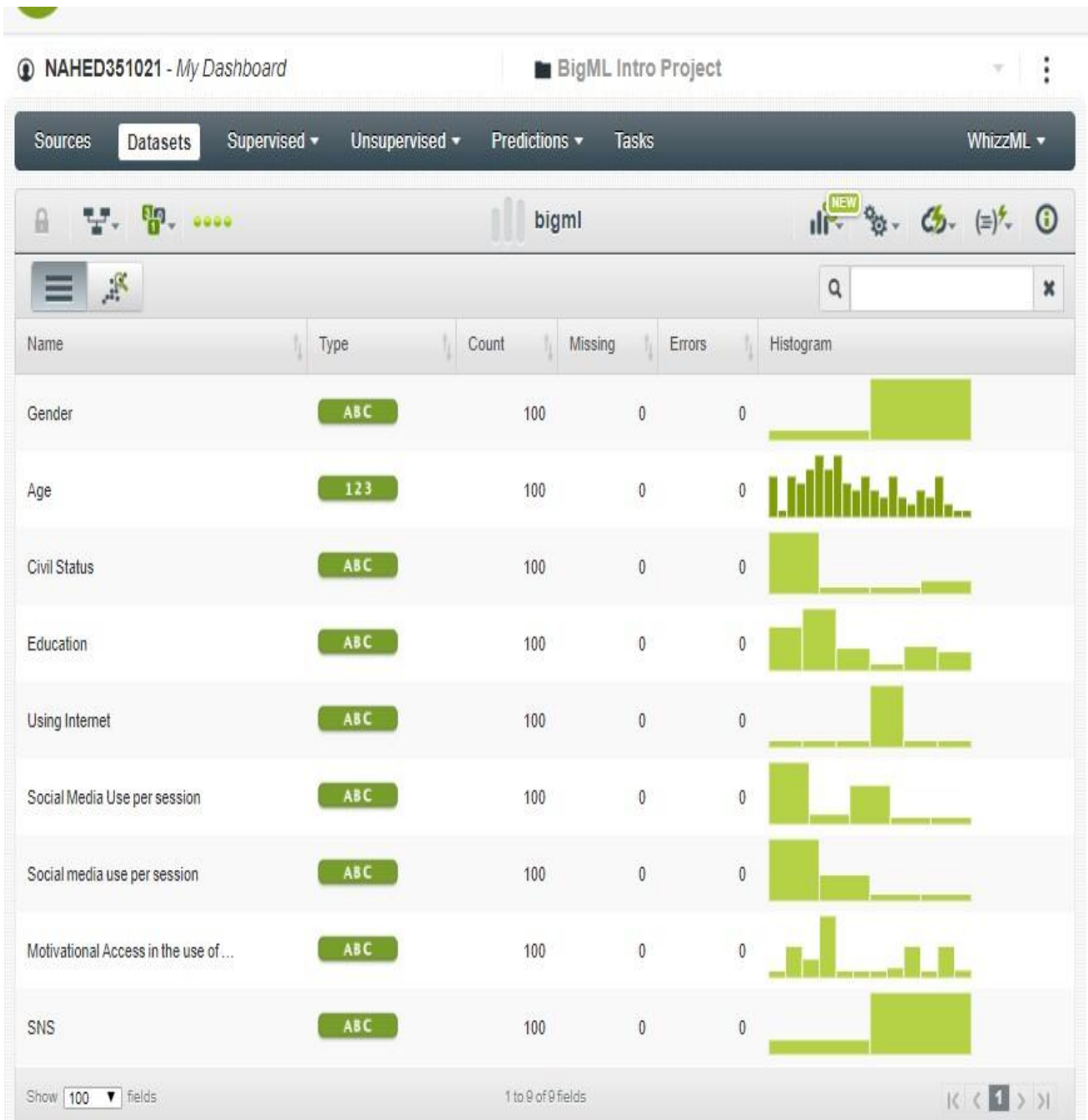


Figure 4. 1: Figure of the dataset in BigML

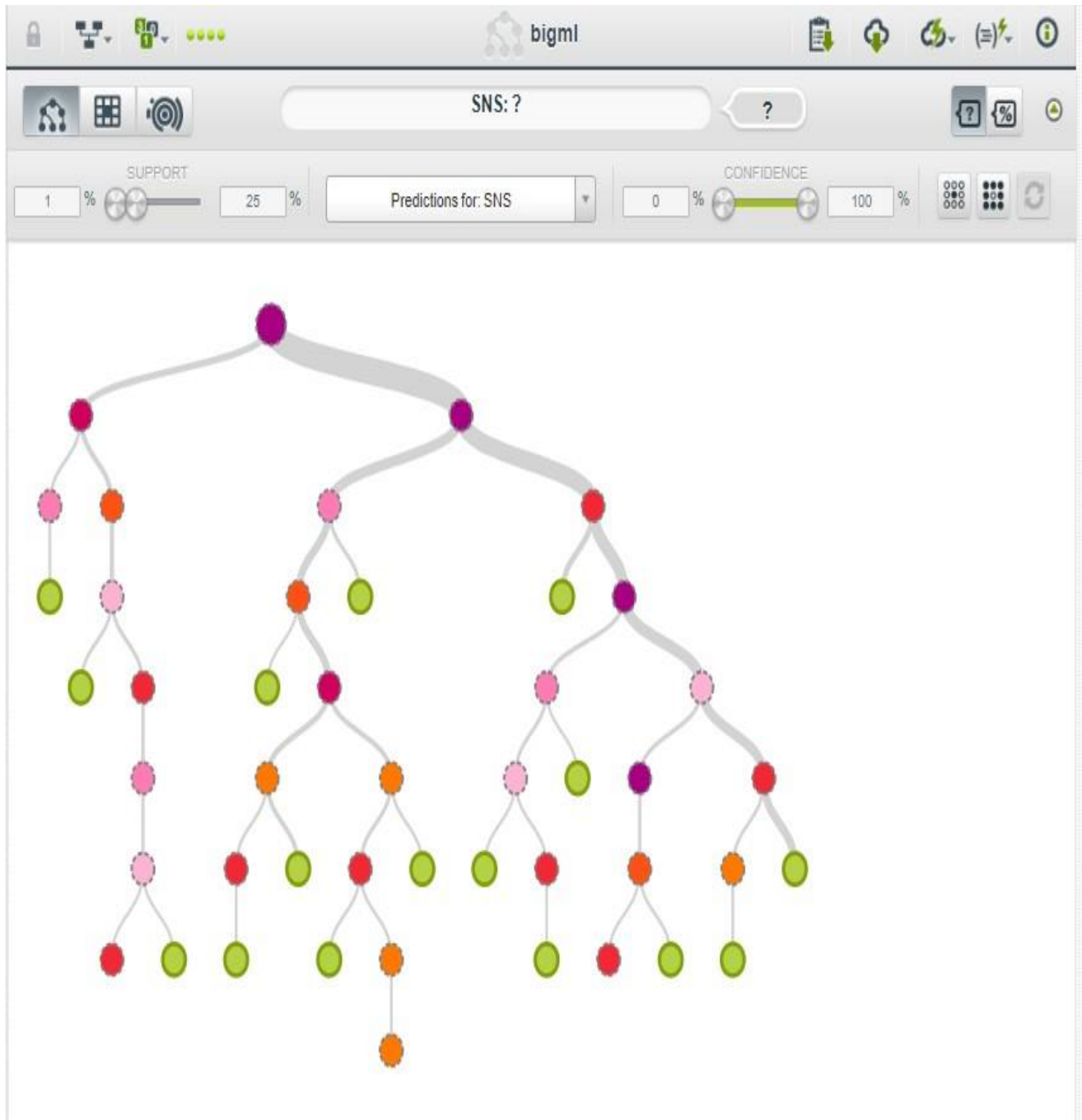


Figure 4. 2:Figure of predictive model using test dataset.

we create a predictive model from our prepared training dataset and evaluate the model using our prepared test dataset.

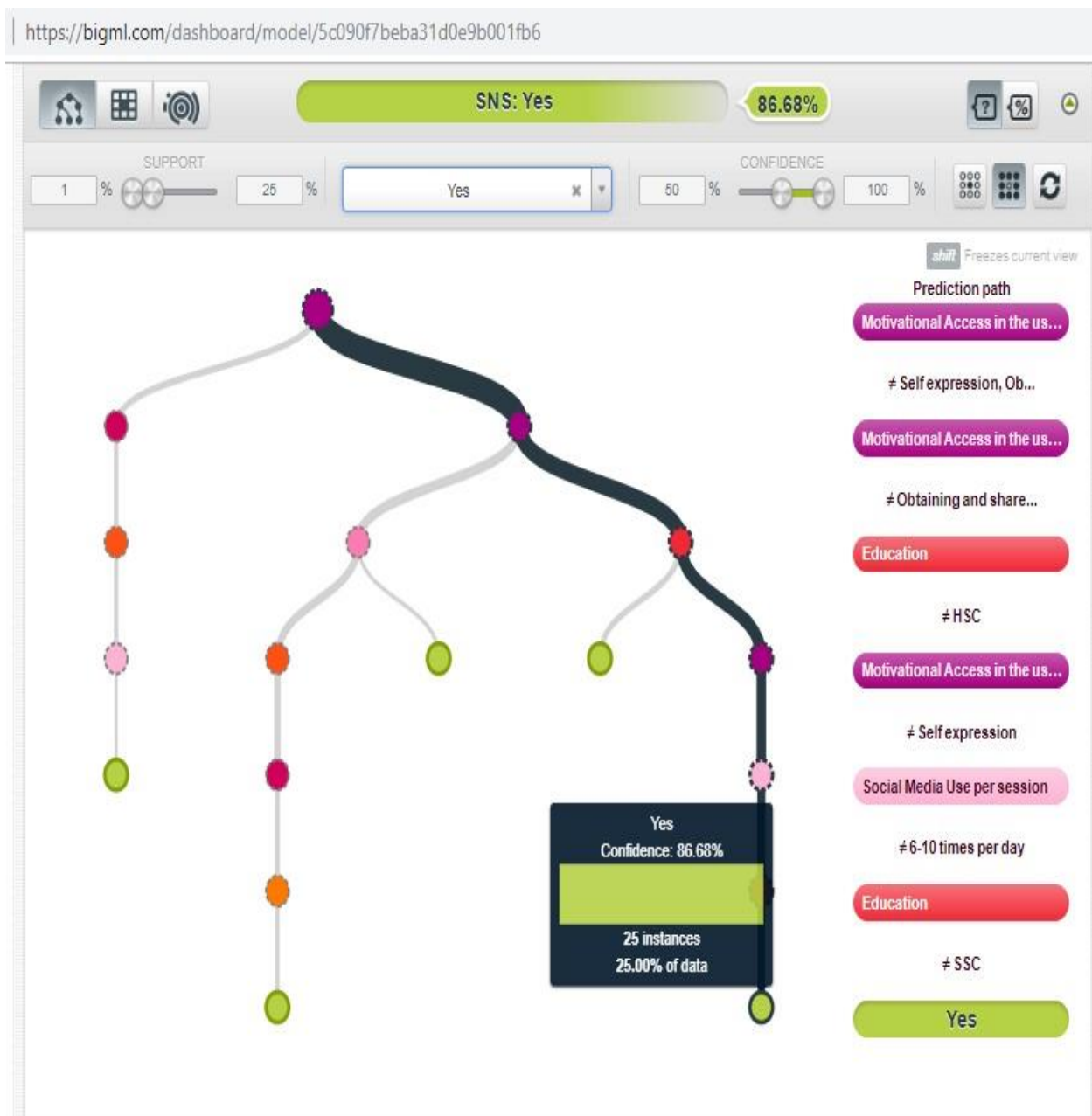


Figure 4. 3:Figure of prediction path of satisfaction1.

According to the following prediction path, there are 25 instances positively satisfied using social media who are not educationally qualified with SSC and HSC, social media use per session is not 6-10 times per day and motivational access in the using social media is not self expression, obtaining and sharing information. And the accuracy is 86.68%.

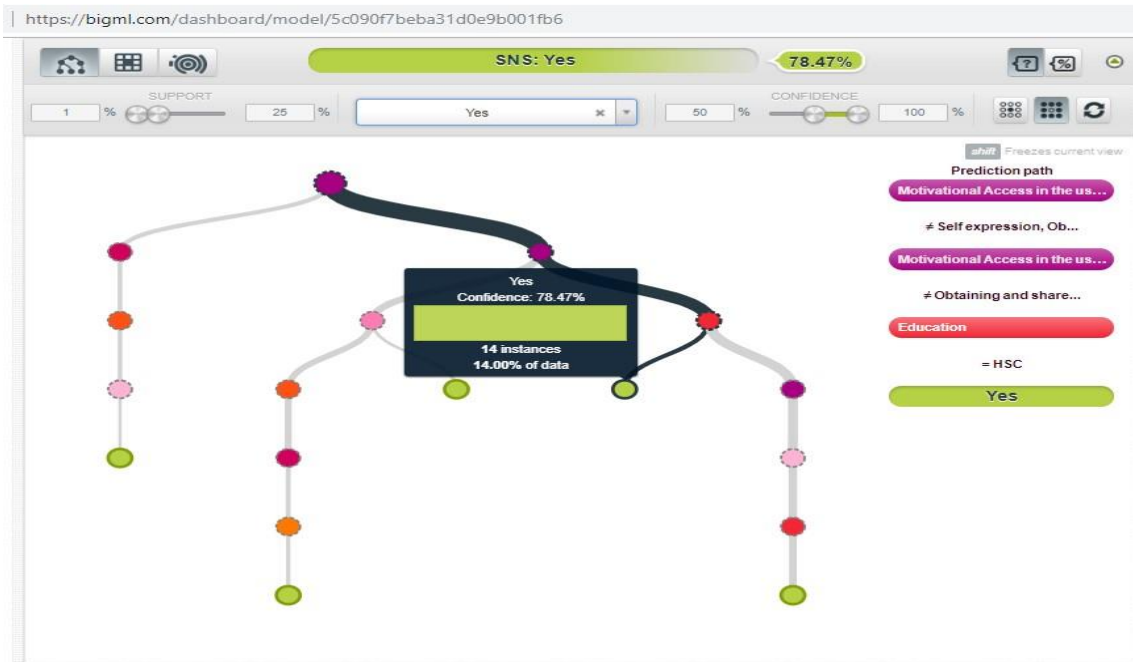


Figure 4. 4:Figure of prediction path of satisfaction2.

There are 14 instances positively satisfied using social media who are educationally qualified with HSC, motivational access in the using social media is not self expression, obtaining and sharing information. And the accuracy is 78.47%.

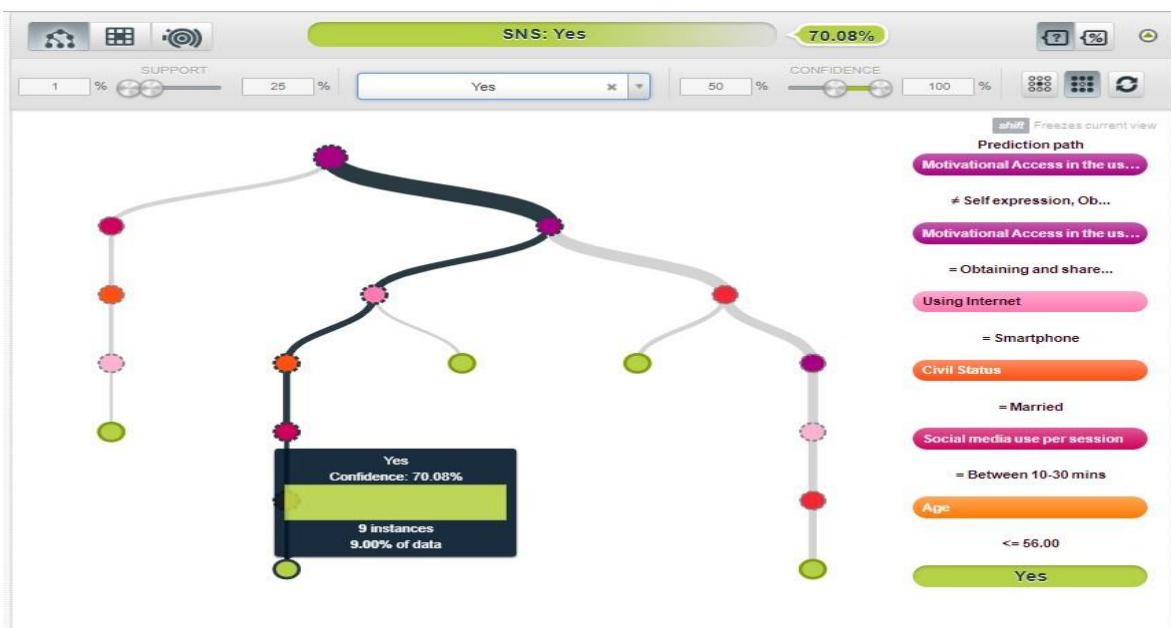


Figure 4. 5:Figure of prediction path of satisfaction3.

There are 9 instances who are married,use smartphone to use internet,social media use per session between 10-30 mins and age is less than 56 years and Motivational Access in the use of ICT is Obtaining and shareing information is satisfied to use social media.The accuracy is 70.08%.

The screenshot displays the BigML web interface. At the top, there is a navigation bar with the 'ml' logo and links for 'PRODUCT', 'GETTING STARTED', 'PRICING', and 'SUPPORT'. The user's account 'NAHED351021' and a 'Dashboard' button are visible. Below the navigation bar, the dashboard title 'NAHED351021 - My Dashboard' and the project name 'BigML Intro Project' are shown. A dropdown menu is open, highlighting 'Predictions' with sub-items 'Sources', 'Datasets', 'Supervised', 'Unsupervised', 'Predictions', 'Tasks', and 'WhizzML'. The main content area shows a prediction job titled 'bigml | Training (80%) with bigml | Test (20%)'. Underneath, there are two summary cards: 'Bigml | Test (20%)' and 'Bigml | Training (80%)'. A 'Configuration' section is also visible. The 'Output preview' section shows a list of data points with columns for various attributes: Gender, Age, Civil Status, Education, Using Internet, Social Media Use per session, Social media use per session, Motivational Access in the use of ICT, SNS, SNS. The data points are as follows:

Gender	Age	Civil Status	Education	Using Internet	Social Media Use per session	Social media use per session	Motivational Access in the use of ICT	SNS	SNS
female	45	Married	HSC	Smartphone	A few times a week	Between 10-30 mins	Obtaining and shareing information	Yes	Yes
male	65	Married	SSC	Smartphone	1-5 times per day	Between 10-30 mins	Keep in touch with family and friends	No	Yes
male	56	Married	Hons	Smartphone	A few times a week	Between 10-30 mins	Obtaining and shareing information	Yes	Yes
male	54	Married	Hons	Computer, Smartphone	1-5 times per day	Between 10-30 mins	Self expression, Obtaining and shareing information, Keep in touch with family and friends	Yes	Yes
male	51	Married	HSC	Smartphone	A few times a week	Between 30-60 mins	Self expression	Yes	Yes
male	58	Married	Hons	Smartphone	1-5 times per day	Between 10-30 mins	Organizing activities, Obtaining and shareing information	Yes	Yes
male	50	Married	Uneducated	Smartphone	1-5 times per day	Between 10-30 mins	Keep in touch with family and		

At the bottom of the output preview, there are two buttons: 'Download batch prediction' and 'Output dataset'.

Figure 4. 6:Batch Prediction output review

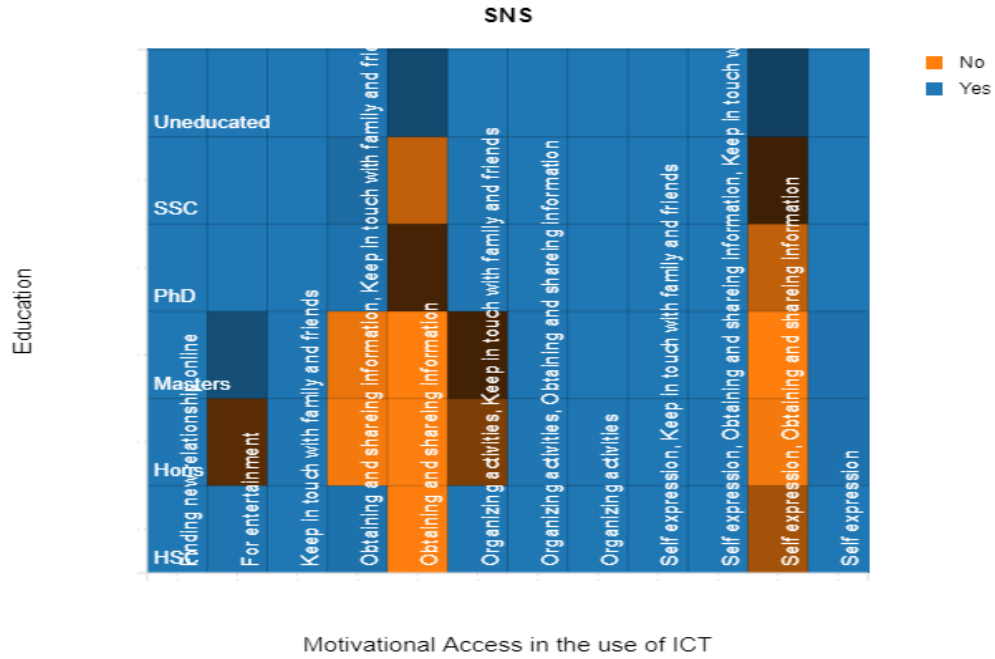


Figure 4. 7:Figure of Deepnets

CHAPTER 5

CONCLUSION & FUTURE RESEARCH

This research conjectures the impact of senior citizens use on life fulfillment. Given the research objective, we identify how senior residents utilize social media in their regular daily existence, conceptualize the impact of social media use on life fulfillment, and empirically study the relationships. The paper reasons that the elderly use of social media is affected by the bidirectional communications of personal, environmental, and behavioral factors. The association of these variables portrayed how elderly achieved the phases of advanced access to new media to connect the elderly's digital divide. The collaboration of these elements captures the elderly's desire to use technology on the grounds that it encourages social bonding with their solid-tie connections. This is considered as their primary inspiration to use the social media. Social media has additionally enabled them to organize activities with family and friends, obtain and share information, and easy access to entertainment, which has propelled them to use technology. Nonetheless, it merits referencing that their dynamic use/conduct of social media is affected by their individual characteristics, explicitly: age, educational advancement, and ability to own and access technology are the undeniable indicators.

As the ageing society is drawing closer and the use of social media is ending up some share of regular day to day life, our work has demonstrated how social media could be utilized to help senior residents in their everyday needs and enhance their in general life satisfaction. Socio-structural and physical condition must be specifically activated by appropriate strategies. For example, support from family members, relatives, and friends play an essential job to guarantee persevering use of social media by the elderly. The information that everybody is social media additionally influences a person's behavior in the adoption of social media.

Our research, makes inquire about and pragmatic commitments on how social media use shapes senior residents' life satisfaction

The future bearing of this investigation is to expand the findings of the elderly use of social media to other different cities perspective. It is recommended to explore different elements of social media to elderly separated from the prominent person to person communication,

photograph, and video sharing. In addition, we didn't assess how senior citizens' dimension of ICT ability may influence contrasts in their use of social media to enhance their life satisfaction. This inquiry about was directed in a single country context where information might be inclined toward one evident culture. Future research may think about conducting a comparative study across multiple countries and discover how impact of social media use for elderly life satisfaction changes culture to culture.

REFERENCES

PAPER

- Antoni Barikdar, Tahera Ahmed, Shamima Parvin Lasker.2016 “The Situation of the Elderly in Bangladesh” *Bangladesh Journal of Bioethics* 2016; 7(1):27-36
- Burke, M., Marlow, C., and Lento, T. 2010. “Social Network Activity and Social Well-Being,” In *Proceedings of the 2010 ACM conference on human factors in computing systems*. New York, NY: ACM, pp 1909–1912.
- Bangladesh Bureau of Statistics (BBS) (2003). *Population Census 2001, National Report (Provisional)*, Ministry of Planning, Dhaka, Bangladesh
- Chan, Celeste J. and Suarez, Merlin Teodosia C., "Social Media as Enabler for ICT Inclusion to Achieve Active Ageing" (2017). *PACIS 2017 Proceedings*. 185.
- Dr Junjie Zhou 2018,” Improving older people’s life satisfaction via social networking site use: Evidence from China”, *Australasian Journal on Ageing*, Vol No 2018 © 2018 AJA Inc.
- Foverskov, M., and Binder, T. 2011. “Super Dots: Making Social Media Tangible for Senior Citizens,”*Proceedings of the 2011 Conference on Designing Pleasurable Products and Interfaces (DPPI '11)*. ACM,New York, NY, USA.
- Greenwood S, Perrin A, Duggan M. Social Media Update 2016.Washington, DC: Pew Research Center;2016.[Cited 14 july,2017.]Available from URL: <http://www.pewinternet.org/2016/11/11/socialmedia-update-2016>
- K.M. Mustafizur Rahman , Muntasir Ibn Mohsin and Ismail Tareque, Trends of Population Ageing from 1950-2050: A Comparative Study Between Bangladesh and World, *Pakistan Journal of Social Sciences*, Year: 2009, Volume: 6, Issue: 1, Page No.: 6-10
- Michael D, Nettesheim C, Zhou Y. *China’s Digital Generations 3.0: The Online Empire*. Boston, MA: Boston Consulting Group;2012.
- M. Nazrul Islam, Dilip C. NathA Future Journey to the Elderly Support in Bangladesh, *Journal of Anthropology*, Volume 2012 (2012), Article ID 752521
- OECD 2008. “Trends Shaping Education,” Retrieved 26 November, 2013, from <http://www.oecd.org/berlin/41250023.pdf>
- Onwuegbuzie Collins, K. 2007. “A typology of mixed methods sampling designs in social science research,” *The Qualitative Report* (12:2), pp. 281–316.
- Pilotto, A., D’Onofrio, G., Benelli, E., ZanESCO, A., Cabello, A., Margelí, MC., Wanche-Politis, S., Seferis, K.,Sancarlo, D., and Kiliyas, D. 2011. “Information and Communication Technology Systems to Improve Quality of Life and Safety of Alzheimer’s Disease Patients: A Multicenter International Survey,” *Journal of Alzheimer’s Disease* (23:141), pp 131-141.

Ractham & Techatassanasoontorn.2014 “Social Media Use and Senior Citizen’s Life Satisfaction”, 25th Australasian Conference on Information Systems,8th -10th Dec 2014, Auckland, New Zealand

Sum S, Mathews RM, Hughes I. Participation of older adults in cyberspace: How Australian older adults use the Internet. Australasian Journal on Ageing 2009; 28: 189–193.

UN World Population Ageing Report 2013. “World Population Ageing 2013.” Retrieved 21 April,2014,from,<http://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2013.pdf>.

Whitlock, L., McLaughlin, A., and Allaire, J. C. 2012. “Individual Differences in Response to Cognitive Training: Using a Multi-modal, Attentionally Demanding Game-based Intervention Computers in Human Behaviour,” Computers in Human Behavior (28:4), pp 1091–1096.

LINK

1. Manuel Amunategui (2016, Aug 16).
<https://www.youtube.com/watch?v=w0jRGVwDHn4>
2. StatQuest with Josh Starmer (2018, Oct 29).
<https://www.youtube.com/watch?v=Kdsp6soqA7o>
3. Data School (2018, Oct 31).
<https://www.youtube.com/watch?v=8Oog7TXHvFY>