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UNIVERSITY INSTITUTE OF COMPUTING

PROJECT REPORT ON

"The Impact of Digital Dependence on Traditional Skills and Mental Well-being"

Program Name: BCA

Subject Name/Code: DATA

INTERPRETATION LAB /(22CAP-354)

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ABSTRACT

This project explores the impact of growing digital dependence on traditional cognitive skills and mental well-being. As people increasingly rely on smartphones, tablets, and computers for everyday tasks, once-common skills like handwriting, mental math, and map reading are gradually fading. Through a survey-based analysis, the project captures how modern digital habits are reshaping learning, memory retention, and problem-solving abilities. The data highlights a clear pattern: the more individuals depend on technology, the less they practice and retain essential traditional skills that once formed the foundation of daily life.

In addition to skill decline, the project investigates the psychological impact of digital behavior — especially the phenomenon of digital hoarding. The tendency to save excessive files, messages, and digital clutter contributes to stress, anxiety, and reduced mental peace. Using Excel for data interpretation and visualization, the findings emphasize the need for a balanced digital lifestyle. By raising awareness of these issues, the project encourages mindful technology use while advocating for the revival of traditional practices that support mental clarity and overall well-being.

INTRODUCTION

In the 21st century, digital technology has become deeply embedded in our daily routines — from communication and education to navigation and entertainment. While this rapid digital transformation has brought undeniable convenience, it has also slowly taken over tasks that once relied on human cognitive skills and manual effort. This project takes a closer look at how our increasing dependence on digital devices is subtly leading to the erosion of traditional skills. For instance, handwriting — once a fundamental method of learning and self-expression — is now often replaced by typing on digital devices. The natural development of fine motor skills, memory retention, and creativity associated with handwriting is diminishing as people spend less time physically writing.

Furthermore, mental math skills, once honed through everyday calculations and problem-solving, are now rarely used due to the immediate availability of calculators and mobile apps. Similarly, map reading, which once required spatial awareness and directional sense, has been replaced almost entirely by GPS navigation. As a result, people are becoming less reliant on their memory and critical thinking for everyday tasks. In addition to these changes, the project also investigates the psychological effects of a digital lifestyle, particularly the concept of **digital hoarding** — the compulsive saving of digital files, photos, and messages. This digital clutter not only consumes storage space but also contributes to feelings of stress, anxiety, and mental fatigue. By analyzing these patterns, the project aims to highlight the need for balance in digital usage and the importance of preserving traditional cognitive skills for mental well-being.

TECHNIQUE

The data interpretation process for this project was carried out using a step-by-step structured approach, ensuring accuracy and meaningful insights:

1.Data Collection:

Primary data was collected using a structured online survey consisting of questions related to digital usage habits, decline in traditional skills, and mental well-being indicators.

2.Data Entry:

Responses from the survey were compiled and exported into Microsoft Excel for organized analysis.

3.Data Cleaning:

Incomplete or invalid entries were filtered out. Consistency in response formats was ensured for accurate calculations and visualization.

4.Categorization of Data:

Survey responses were divided into key categories such as screen time, handwriting usage, calculator dependency, GPS reliance, digital hoarding, and mental stress.

5.Exploratory Data Analysis (EDA):

Basic statistical functions such as counts and percentages were used to understand trends and behavior patterns in each category.

6.Graphical Representation:

Pie charts and bar graphs were created using Excel to visually represent the impact of digital usage on traditional skills and mental health factors.

7.Interpretation of Findings:

Each graph and table was analyzed to draw meaningful conclusions — such as the percentage of users who feel less mentally peaceful or rely heavily on GPS.

8.Insight Generation:

Key insights were documented, such as the high correlation between extended screen time and reported stress levels, or the majority's reduced usage of handwriting.

9.Behavioral Pattern Analysis:

Patterns like digital hoarding, excessive device reliance, and decreased real-world skill usage were identified and summarized.

10.Recommendations:

Based on the insights, suggestions were proposed — including promoting digital detox practices, reintroducing traditional learning methods, and maintaining screen-time balance.



DATA COLLECTED:

Name	Age	Occupation	Education Level	Handwriting	Confidence in writing a formal letter	Handwriting is messy
Akash kumar	18-25	Student	Bachelor's Degree	Weekly		1 Yes
Gurmeet Singh	18-25	Student	Bachelor's Degree	Weekly		2 No
Sanya	18-25	Student	Bachelor's Degree	Weekly		1 Yes
Anuj Sharma	18-25	Student	Bachelor's Degree	Daily		1 Neutral
Muskaan Gairola	36-45	Business	Bachelor's Degree	Daily		2 Yes
Anil kumar	56+	Retired	Bachelor's Degree	Rarely		2 Yes
Neelam Asthana	56+	Retired	Master's Degree	Monthly		2 No
Akansha sharma	46-55	Business	Bachelor's Degree	Rarely		1 Yes
Pratistha Gulati	18-25	Student	High School	Daily		1 Yes
Japneet Singh	18-25	Student	Senior secondary	Rarely		1 Neutral
Trishal Raj	18-25	Student	Bachelor's Degree	Rarely		1 Yes
Jemish Modh	18-25	Student	Bachelor's Degree	Daily		0 Yes
Somnath	18-25	Student	Bachelor's Degree	Weekly		1 Yes
Kunal Sagar	18-25	Student	Bachelor's Degree	Daily		1 Yes
Ketan	18-25	Student	Bachelor's Degree	Weekly		2 Yes
Ankita	Below 18	Student	High School	Daily		2 Yes
Sirjan Singh Khurana	18-25	Student	Bachelor's Degree	Daily		1 Yes
Saloni Chopra	18-25	Student	Bachelor's Degree	Monthly		1 Yes
Kunal Solanki	26-35	Professional (Non-Tech)	Bachelor's Degree	Daily		1 Yes
Ansh palod	18-25	Student	Bachelor's Degree	Daily		1 Yes
Dikshant Arora	18-25	Student	Bachelor's Degree	Rarely		1 Neutral
Budhil porwal	18-25	Student	High School	Rarely		1 No
Ayush Gang	18-25	Student	Bachelor's Degree	Daily		2 Yes
Arpit	18-25	Student	Bachelor's Degree	Weekly		2 Neutral
Saksham Kumar Singh	18-25	Student	Bachelor's Degree	Daily		1 Yes
Simran	18-25	Student	Bachelor's Degree	Weekly		2 Yes
Lakshmi Gupta	18-25	Student	Bachelor's Degree	Daily		2 Neutral
Rohan	26-35	Professional (Tech)	Master's Degree	Rarely		2 Neutral

User_ID	Age	Gender	Total_App	Daily_Score	Number_c	Social_Me	Productivit	Gaming_A	Location	Age group
1	56	Male	2.61	7.15	24	4.43	0.55	2.4	Los Angeles	55+
2	46	Male	2.13	13.79	18	4.67	4.42	2.43	Chicago	45-54
3	32	Female	7.28	4.5	11	4.58	1.71	2.83	Houston	25-34
4	25	Female	1.2	6.29	21	3.18	3.42	4.58	Phoenix	25-34
5	38	Male	6.31	12.59	14	3.15	0.13	4	New York	35-44
6	56	Female	3.31	1.04	21	2.02	3.45	2.26	Chicago	55+
7	36	Male	4.81	1.52	24	3.76	1.58	3.59	Los Angeles	35-44
8	40	Male	9.53	8.85	11	2.66	0.28	2.93	Chicago	35-44
9	28	Male	11.35	12.8	9	3.39	3.05	2.46	Phoenix	25-34
10	28	Male	1.8	4.11	16	2.14	1.2	0.96	New York	25-34
11	41	Female	6.88	7.11	21	3.66	1.93	2.32	Chicago	35-44
12	53	Female	10.71	6.86	21	4.12	0.4	1.23	Phoenix	45-54
13	57	Female	1.91	7.15	4	0.73	0.74	4.57	Los Angeles	55+
14	41	Male	10.07	9.09	11	4.16	1.49	1.68	Houston	35-44
15	20	Male	4.94	7.11	15	2.7	0.45	4.76	Los Angeles	18-24
16	39	Male	4.54	6.82	17	4.22	4.55	2.67	New York	35-44
17	19	Female	11.75	7.17	5	2.16	0.03	3.16	Los Angeles	18-24
18	41	Male	3.21	8.68	13	1.9	2.42	2.71	Los Angeles	35-44
19	47	Female	8.63	7.98	23	4.58	0.62	0.65	Los Angeles	45-54
20	55	Female	10.04	12.1	16	1.26	1.54	1.88	Los Angeles	55+
21	19	Female	1.45	1.64	27	4.22	4.63	0.5	New York	18-24
22	38	Female	8.37	11.83	10	2.42	0.81	3.11	Phoenix	35-44
23	50	Female	11.47	11.97	20	2.57	4.83	2.23	Chicago	45-54
24	29	Female	2.37	4.7	21	1.54	1.03	3.89	Houston	25-34
25	39	Male	10.86	7.02	18	2.87	3.71	1.1	Chicago	35-44
26	42	Male	7.54	6.7	4	1.63	2.73	0.82	Chicago	35-44
27	44	Female	7.78	3.84	10	0.2	4.42	2.03	Houston	35-44
28	59	Female	7.74	6.16	24	1.36	2.77	4.63	New York	55+
29	45	Male	4.29	1.58	8	0.03	2.67	3.55	Houston	45-54
30	33	Female	11.29	4.61	14	4.89	0.98	2.09	New York	25-34
31	32	Female	11.42	11.62	17	4.83	0.83	2.59	Chicago	25-34
32	20	Male	7.88	4.7	27	1.98	4.58	0.42	New York	18-24

REPORT1Traditional Skills SurveyREPORT2Mobile UsageREPORT3Tech & Mental Health 2024



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1	User_ID	Age	Gender	Technolog	Social_Me	Gaming_H	Screen_Tir	Mental_Ht	Stress_Lev	Sleep_Hou	Physical_A	Support_S	Work_Env	Online_Suj	Age group	
2	USER-0001	23	Female	6.57	6	0.68	12.36	Good	Low	8.01	6.71	No	Negative	Yes	18-24	
3	USER-0001	21	Male	3.01	2.57	3.74	7.61	Poor	High	7.28	5.88	Yes	Positive	No	18-24	
4	USER-0001	51	Male	3.04	6.14	1.26	3.16	Fair	High	8.04	9.81	No	Negative	No	45-54	
5	USER-0001	25	Female	3.84	4.48	2.59	13.08	Excellent	Medium	5.62	5.28	Yes	Negative	Yes	25-34	
6	USER-0001	53	Male	1.2	0.56	0.29	12.63	Good	Low	5.55	4	No	Positive	Yes	45-54	
7	USER-0001	58	Male	5.59	5.74	0.11	1.34	Poor	Low	8.61	6.54	Yes	Neutral	Yes	55+	
8	USER-0001	63	Female	3.38	2.55	3.79	9.78	Excellent	Medium	8.61	1.34	Yes	Neutral	No	55+	
9	USER-0001	51	Female	7.18	4.1	4.74	8.14	Excellent	Medium	7.11	5.27	Yes	Neutral	No	45-54	
10	USER-0001	57	Other	10.86	4.11	0.08	6.02	Fair	Medium	7.19	5.22	No	Positive	No	55+	
11	USER-0001	31	Other	4.3	7.23	0.81	6.87	Excellent	High	5.09	0.47	No	Positive	No	25-34	
12	USER-0001	53	Other	4.78	3.94	1.88	14.87	Poor	High	5.13	3.01	Yes	Neutral	No	45-54	
13	USER-0001	64	Other	4.83	4.85	1.68	13.68	Fair	Low	8.57	6.35	No	Neutral	Yes	55+	
14	USER-0001	40	Female	3.06	4.06	2.54	10.65	Poor	High	7.9	0.49	Yes	Negative	Yes	35-44	
15	USER-0001	24	Other	5.82	5.22	3.3	1.65	Excellent	High	4.82	7.15	No	Positive	No	18-24	
16	USER-0001	38	Female	10.48	4.53	0.94	10.27	Poor	High	7.13	7.14	Yes	Negative	No	35-44	
17	USER-0001	53	Male	7.51	0.21	4.17	5.08	Good	Medium	8.53	5.05	Yes	Negative	No	45-54	
18	USER-0001	26	Female	6.4	5.4	4.76	11.4	Fair	High	4.62	9.65	Yes	Neutral	Yes	25-34	
19	USER-0001	55	Female	2.03	6.56	2.01	14.88	Fair	Low	8.95	8.96	Yes	Negative	No	55+	
20	USER-0001	55	Male	2.94	0.61	2.13	11.49	Excellent	High	7.71	7.51	Yes	Neutral	No	55+	
21	USER-0001	37	Other	10.74	3.85	1.29	6	Good	Medium	5.69	7.77	Yes	Positive	No	35-44	
22	USER-0001	57	Female	7.69	7.33	3.16	9.55	Fair	Low	7.07	5.65	Yes	Neutral	No	55+	
23	USER-0001	34	Male	8.44	1.14	2.28	1.51	Fair	High	4.76	0.06	No	Negative	Yes	25-34	
24	USER-0001	38	Female	1.27	1.22	2.92	2.83	Poor	Low	4.01	6.48	No	Neutral	Yes	35-44	
25	USER-0001	39	Male	2.06	5.99	3.96	9.8	Excellent	Low	5.83	7.59	Yes	Negative	Yes	35-44	
26	USER-0001	42	Other	6.23	3.88	1.52	14.16	Poor	Medium	5.73	8.7	No	Positive	Yes	35-44	
27	USER-0001	27	Other	7.39	4.15	0.19	3.03	Poor	Medium	4.85	0.34	Yes	Positive	Yes	25-34	
28	USER-0001	23	Male	2.2	0.06	2.49	12.79	Poor	Medium	5.33	6.55	No	Positive	Yes	18-24	
29	USER-0001	50	Female	1.16	0.51	3.2	14.72	Good	High	8.37	4.97	No	Neutral	Yes	45-54	
30	USER-0001	60	Other	5.92	7.43	2.17	5.36	Excellent	Low	5.36	9.87	No	Negative	No	55+	
31	USER-0001	20	Female	3.65	7.48	0.32	1.63	Excellent	Medium	8.01	9.28	Yes	Neutral	No	18-24	
32	USER-0001	40	Female	5.98	4.07	2.18	8.48	Fair	Low	8.27	9.78	Yes	Positive	No	35-44	
33	USER-0001	29	Female	11.8	6.11	2.86	8.05	Fair	Medium	6.74	9.78	No	Positive	Yes	25-34	
REPORT1 Traditional Skills Survey REPORT2 Mobile Usage REPORT3 Tech & Mental Health 2024 Mental Health in Tech																

FORMULA

- Key formulas and techniques were applied to interpret the survey data effectively:
- **Percentage Calculation:**
 - To analyze response distribution for each question.
 - **Formula:** $(\text{Selected responses} \div \text{Total responses}) \times 100$
- **Frequency Count:**
 - Used to count how many people experienced behaviors like reduced handwriting or digital hoarding.
 - **Formula:** =COUNTIF(range, "criteria")
- **Average Screen Time:**
 - Calculated to determine daily device usage patterns.
 - **Formula:** =AVERAGE(range)
- **Comparison Analysis:**
 - Used side-by-side bar charts to compare traditional skill use vs digital alternatives.
- **Stress Correlation:**
 - Identified links between screen time, digital hoarding, and mental stress using conditional formatting and observation.
- **Skill Decline Ratio:**
 - Used to determine the ratio of users who rarely use traditional skills to those who still practice them.
 - **Formula:** $(\text{Users not using traditional skills} / \text{Total users}) \times 100$

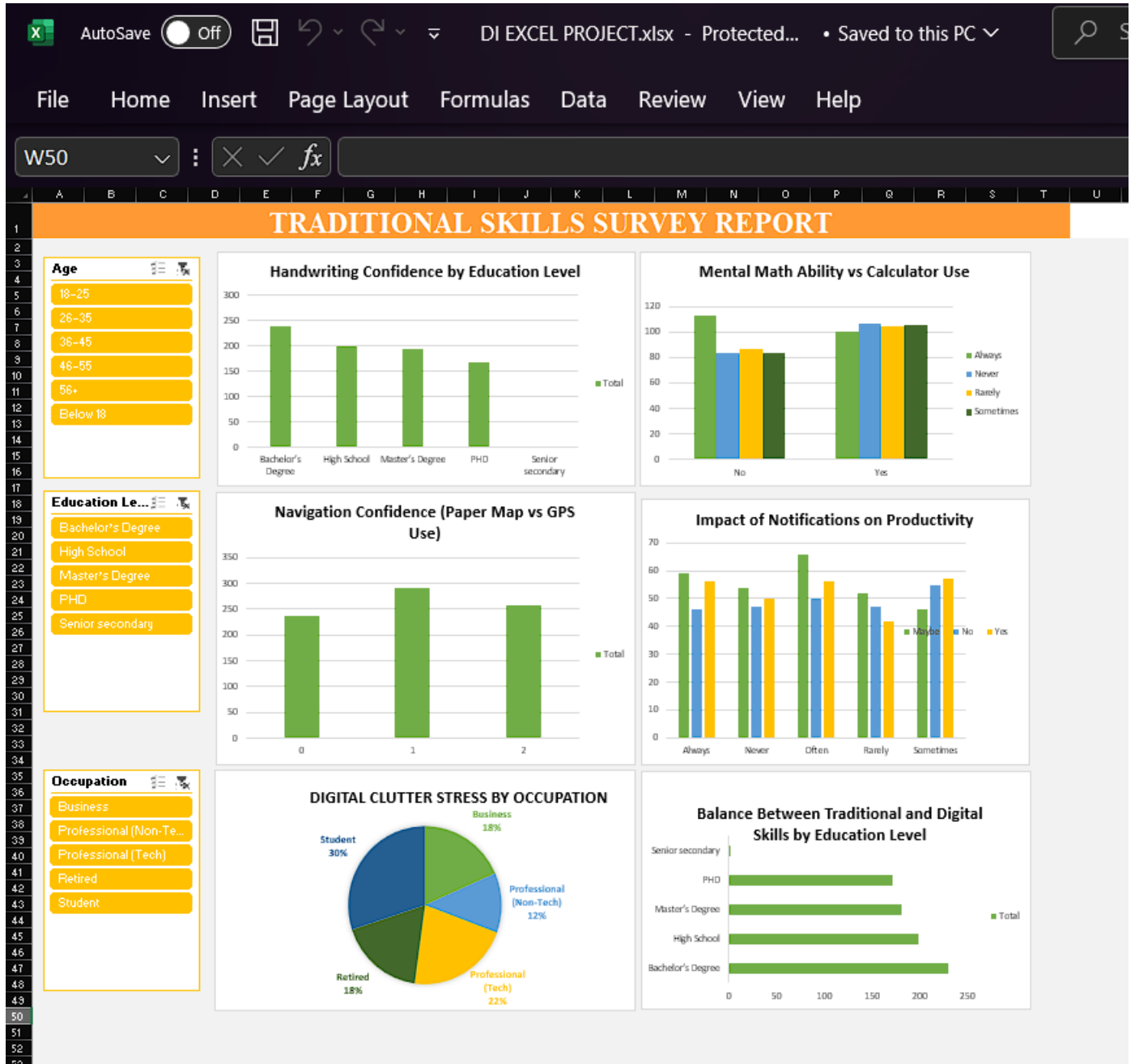
PROJECT FEATURES

- **Comprehensive Survey:** Covered handwriting habits, calculator use, mental math, and digital behavior.
- **Demographic Analysis:** Segmented by age, gender, education, and occupation for detailed insights.
- **Technology Usage Data:** Tracked screen time, app categories, and mobile usage patterns.
- **Mental Health Insights:** Analyzed psychological impact of tech use, especially in the tech industry.
- **Workplace Factors:** Studied remote work, support systems, and openness around mental health.
- **Balance Scoring:** Used a score to assess balance between traditional skills and digital reliance.
- **Correlation Findings:** Linked tech usage with productivity, stress, and mental well-being.
- **User Trends:** Identified age and profession-based preferences in digital vs. traditional methods.
- **Practical Applications:** Offers useful insights to promote healthier, more balanced digital habits.

RESULT & ANALYSIS

- **Handwriting & Traditional Skills:** Most respondents, especially students aged 18–25, still practice handwriting regularly, showing its continued relevance.
- **Mental Math vs. Calculators:** Basic mental math is common, but reliance on calculators is increasing for simple tasks.
- **Screen Time Patterns:** Daily screen time averages 7–13 hours, highest among the 25–34 age group.
- **App Usage:** Social media and gaming dominate usage, while productivity apps are used less often.
- **Tech & Productivity:** Mixed views—some feel tech boosts productivity; others cite frequent distractions.
- **Digital Stress:** Screen time and digital clutter (like unread emails) contribute to user stress.
- **Mental Health in Tech:** Many tech professionals face mental health challenges, with limited workplace support.
- **Workplace Openness:** There's hesitation to discuss mental health at work due to stigma and lack of support.
- **Remote Work:** Common but not always linked to better mental well-being.
- **Traditional vs. Digital Balance:** A balanced use of technology and traditional skills is essential for well-being and productivity.

DASHBOARD:





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A B C D E F G H I J K L M N O P Q R S T

MOBILE USAGE REPORT

Age



- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26

Gender



- Female
- Male

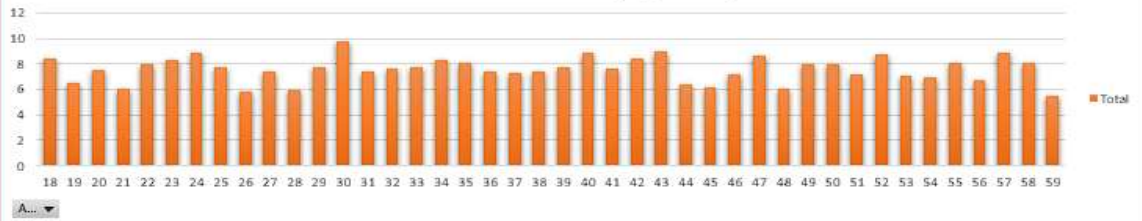
Location



- Chicago
- Houston
- Los Angeles
- New York
- Phoenix

Average of Daily_Screen_Time_Hours

Total Screen Time by Age Group

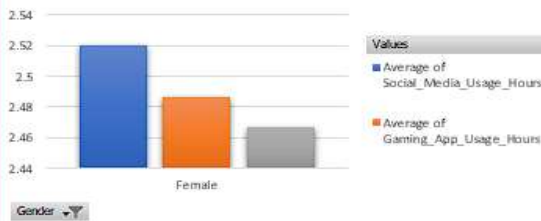


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App Usage Type Comparison

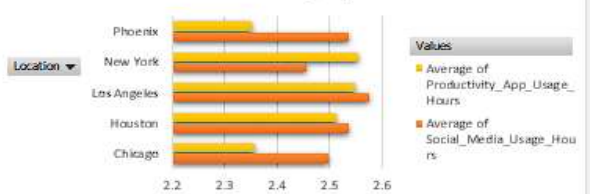


Gender

Average of Social_Media_Usage_Hours

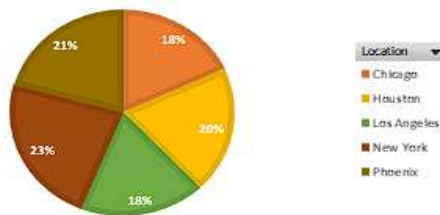
Average of Productivity_App_Usage_Hours

Social Media vs Productivity (Time Drain Insight)



Sum of Gaming_App_Usage_Hours

GAMING USAGE HOTSPOTS

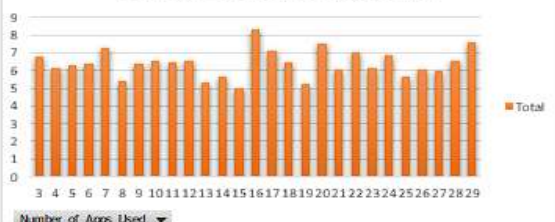


Location

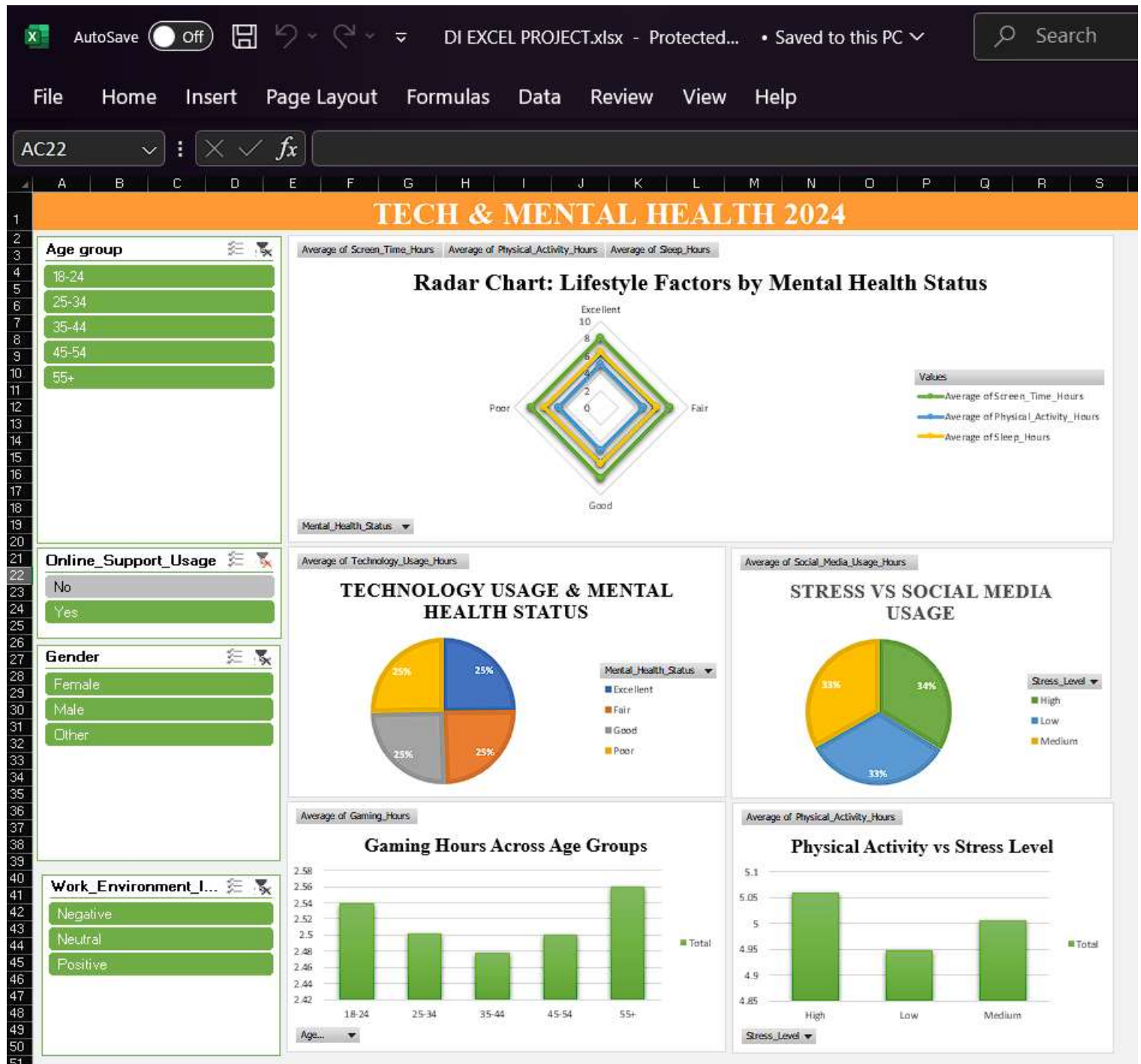
- Chicago
- Houston
- Los Angeles
- New York
- Phoenix

Average of Total_App_Usage_Hours

Number of Apps vs Total Usage



Number of Apps Used



GITHUB LINK:-

<https://github.com/Simran0020/Digital-Dependence>

CONCLUSION

- ☐ Traditional skills like handwriting and mental math are declining but still hold value for a segment of the population, especially in formal settings.
- ☐ Excessive mobile and screen usage is linked to reduced productivity and increased stress, especially among younger age groups.
- ☐ Tech professionals face notable mental health issues, which are often unaddressed in the workplace. There's a need for more supportive and open environments.
- ☐ A balanced approach combining traditional practices and mindful tech use could enhance productivity and well-being.