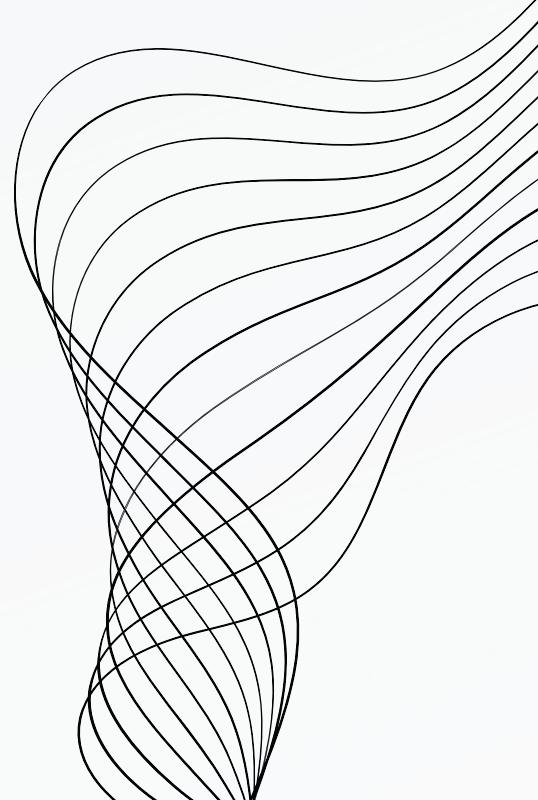


MIND GAME INSIGHTS

A DEEP DIVE INTO GAMING AND PSYCHOLOGICAL WELL-BEING RELATIONSHIPS

COURSE: INST 737 - INTRODUCTION TO DATA SCIENCE



TEAM:

**RAJEEVAN MADABUSHI
PRANAV ADIRAJU
ASMITA SAMANTA**

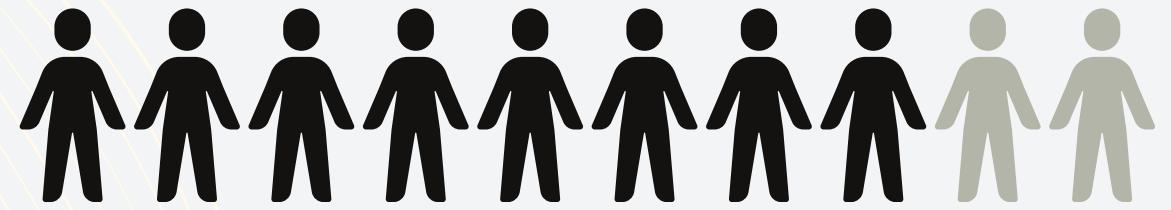
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GAMING - THE GENZ AND MILLENIAL OBSESSION

GAMING IS BY THE WORLD'S
FAVOURITE HOBBY FOR
GENZ & MILLENIALS !

94%



PANDEMIC & GAMING ADDICTION



COVID - 19 IMPACT ON GAMING ADDICTION:

Gaming surged as a primary pastime during quarantine help individuals cope up with pandemic stressors. But all this at what cost ?

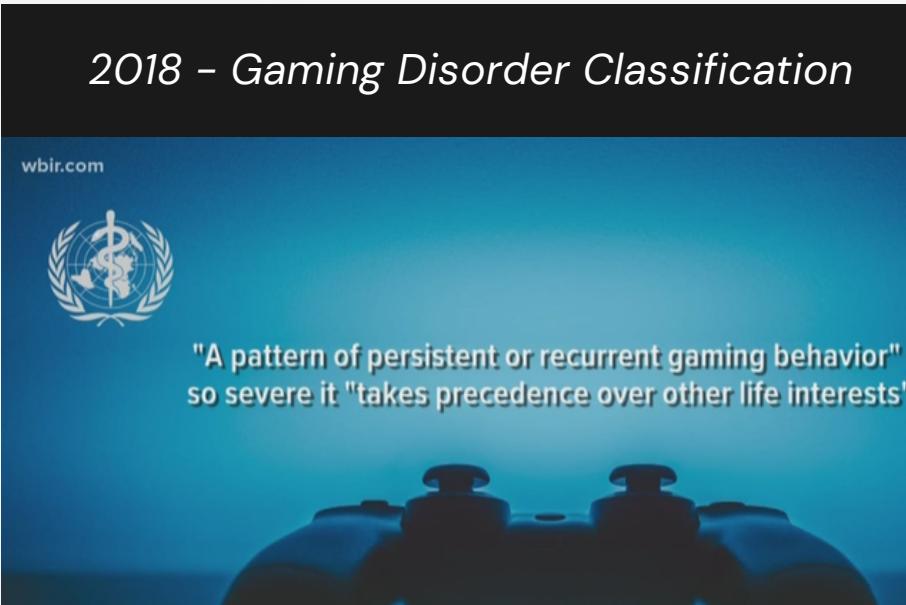


THE RAISING CONCERN:

Recreational players transitioning towards potential gaming addiction during the pandemic.



WHO'S STANCE: DID THIS BACKFIRE ?



In the 11th Revision of the International Classification of Diseases (ICD-11), the WHO officially recognized "**gaming disorder**" as a mental health condition.

During the onset of the COVID-19 pandemic, the world experienced widespread lockdowns, leading to physical and social isolation. Recognizing the potential of video games as a tool for social connection, the WHO endorsed the **#PlayApartTogether** campaign.



BACKGROUND OF OUR RESEARCH

REASEARCH OBJECTIVE

Predict employment status and gaming motivations using a myriad of factors like demographics, social context, gaming hours, and psychological indicators.

TECHNICAL SIGNIFICANCE

Unraveling the complex interplay of diverse factors using predictive modeling and data analysis to better understand human behaviors.

SOCIETAL IMPACT

Inform policymakers and educators about the relationship between gaming, mental well-being, and employment.

Offer insights to mental health professionals to address potential issues arising from gaming habits.

CONTRIBUTION TO DATA SCIENCE:

Enhancing the ability to predict and explain complex human behaviors using multifaceted data with a special focus on cyberpsychology

KEY QUESTION

How do gaming habits, combined with various personal and societal factors, influence one's psychological health and employment status?



DATA DISCOVERY

Source

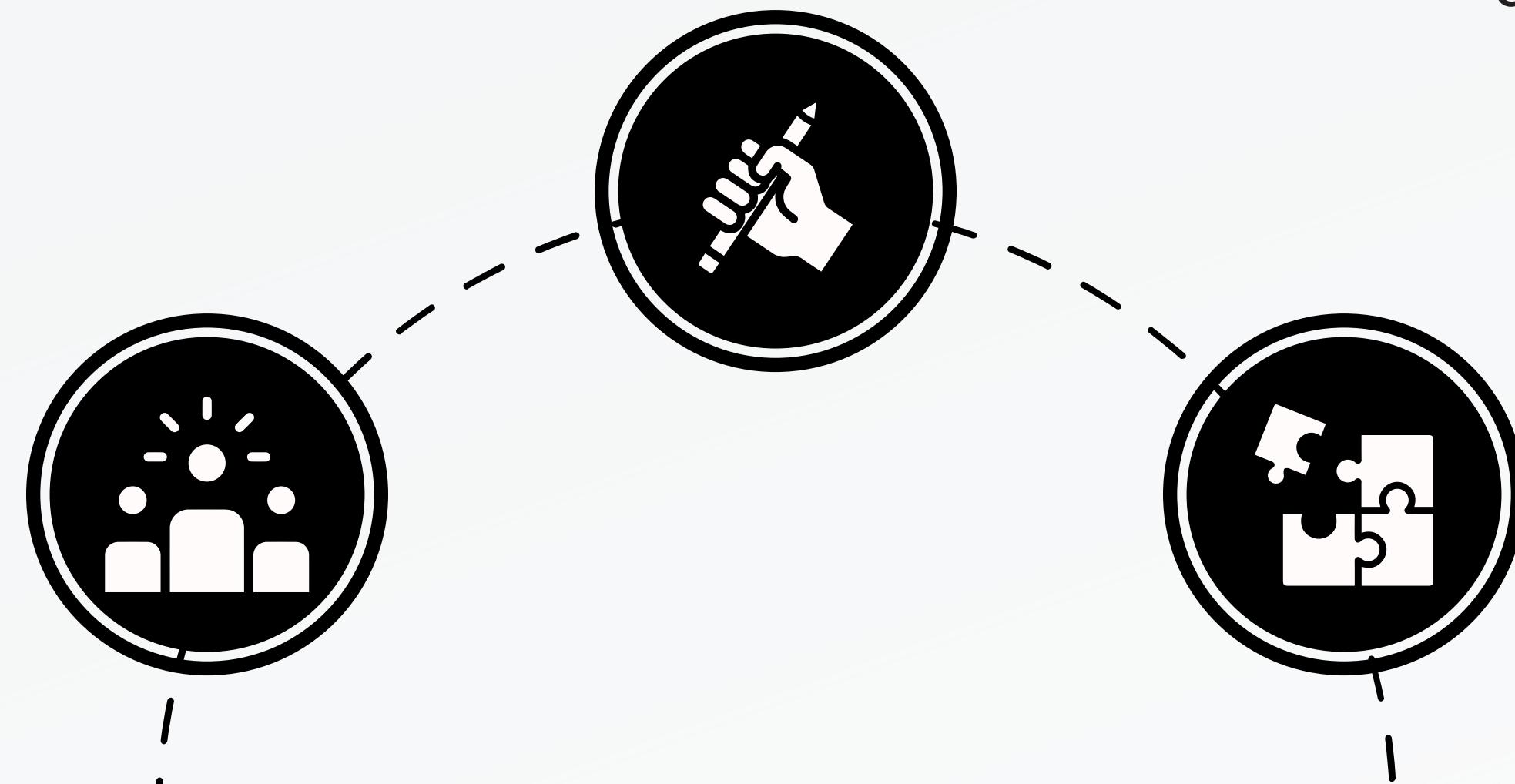
Open Science
Framework
(OSF)

Mode of Collection

Online Survey
with
13,464 participants

Data Description

54 columns
that cover
information on
Gaming, personal,
demographics &
psychological
assessments



DATA DISCOVERY (CONTD..)

GAD-7 Test

GAD-7				
Over the <u>last 2 weeks</u> , how often have you been bothered by the following problems? <i>(Use "✓" to indicate your answer)</i>	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
(For office coding: Total Score T = ___ + ___ + ___)				

SWLS Test

	Strongly agree	Agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Disagree	Strongly disagree
1 In most ways my life is close to my ideal.	7	6	5	4	3	2	1
2 The conditions of my life are excellent.	7	6	5	4	3	2	1
3 I am satisfied with my life.	7	6	5	4	3	2	1
4 So far I have gotten the important things I want in life.	7	6	5	4	3	2	1
5 If I could live my life over, I would change almost nothing.	7	6	5	4	3	2	1

SPIN Test

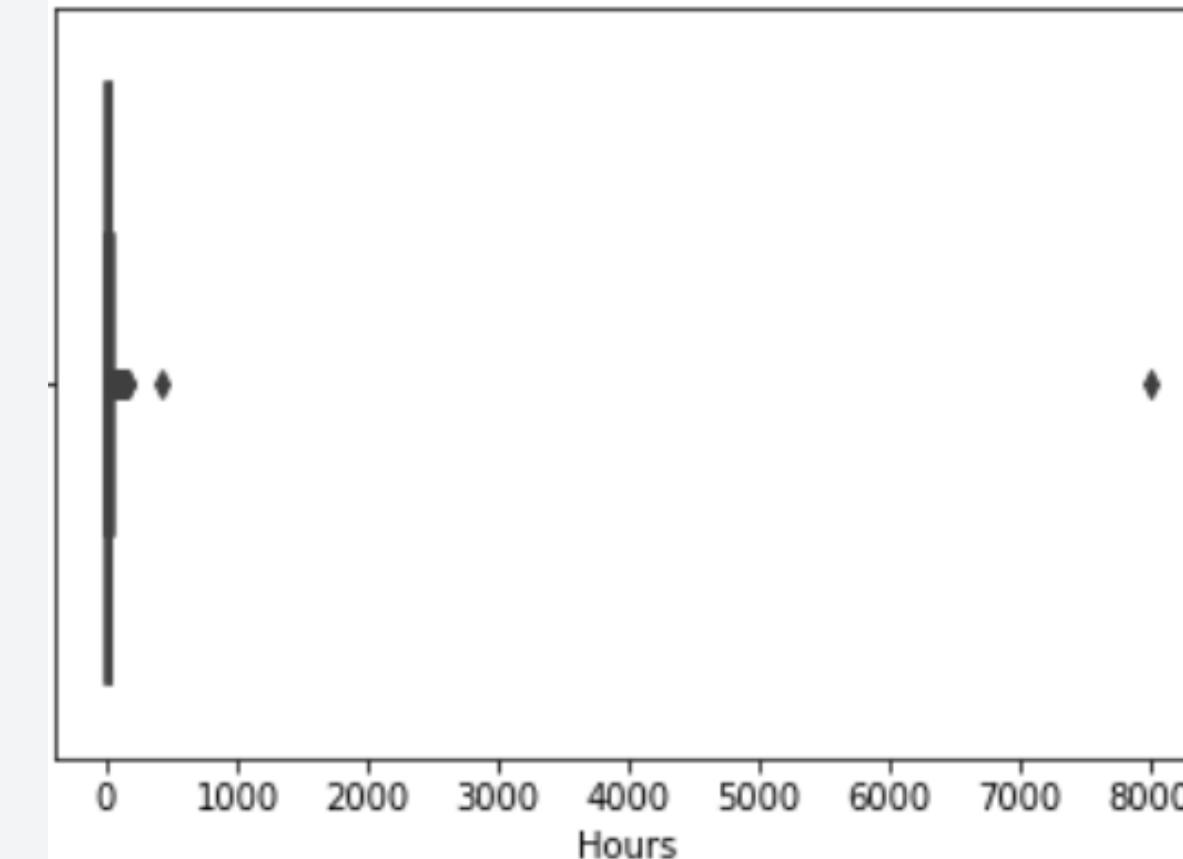
	Not at all	A little bit	Somewhat	Very much	Extremely
1. I am afraid of people in authority	0	1	2	3	4
2. I am bothered by blushing in front of people	0	1	2	3	4
3. Parties and social events scare me	0	1	2	3	4
4. I avoid talking to people I don't know	0	1	2	3	4
5. Being criticized scares me a lot	0	1	2	3	4
6. I avoid doing things or speaking to people for fear of embarrassment	0	1	2	3	4
7. Sweating in front of people causes me distress	0	1	2	3	4
8. I avoid going to parties	0	1	2	3	4
9. I avoid activities in which I am the centre of attention	0	1	2	3	4
10. Talking to strangers scares me	0	1	2	3	4
11. I avoid having to give speeches	0	1	2	3	4
12. I would do anything to avoid being criticized	0	1	2	3	4
13. Heart palpitations bother me when I am around people	0	1	2	3	4
14. I am afraid of doing things when people might be watching	0	1	2	3	4
15. Being embarrassed or looking stupid are among my worse fears	0	1	2	3	4
16. I avoid speaking to anyone in authority	0	1	2	3	4
17. Trembling or shaking in front of others is distressing to me	0	1	2	3	4

DATA PREP AND DATA CLEANING PROCESS

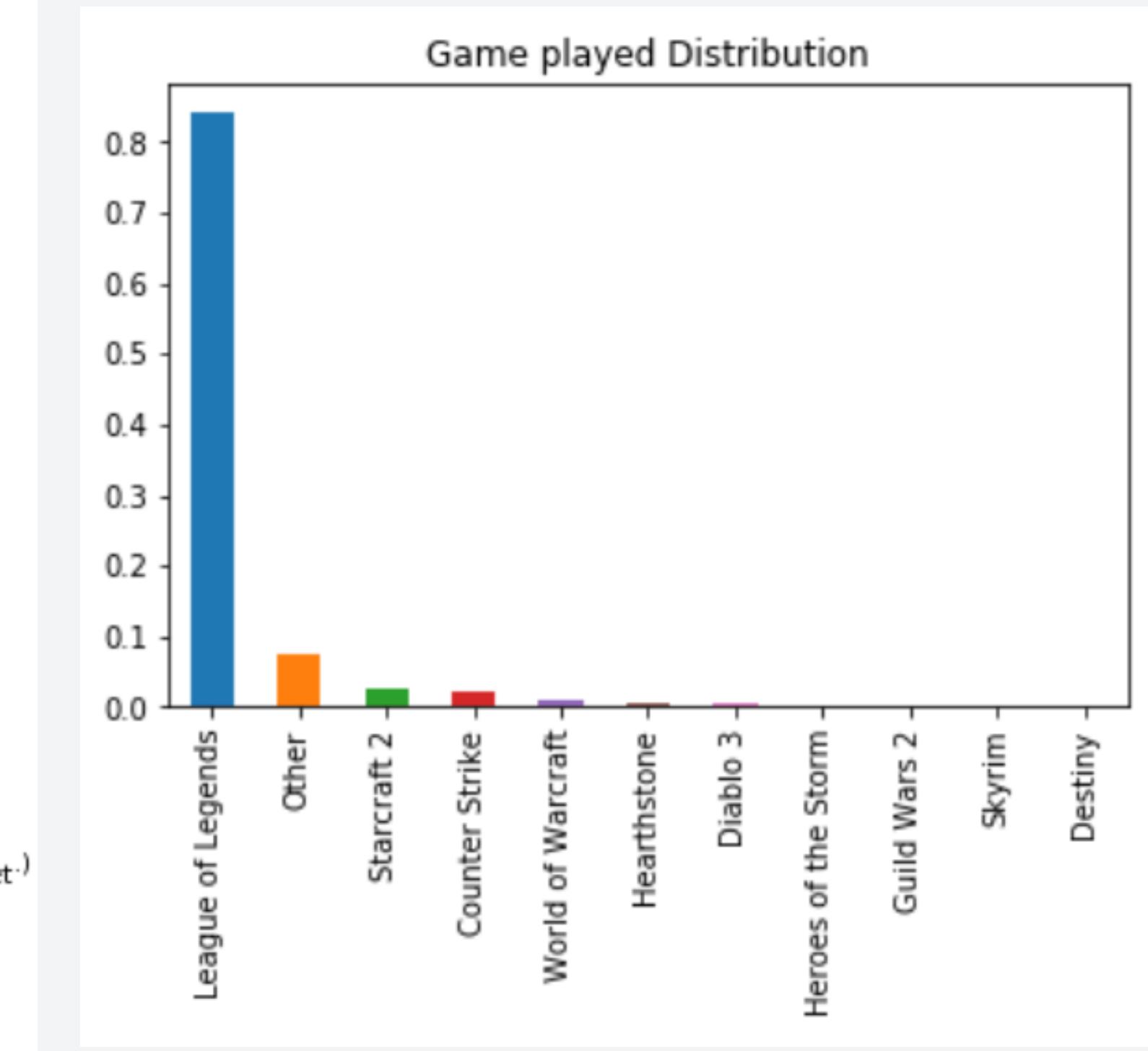
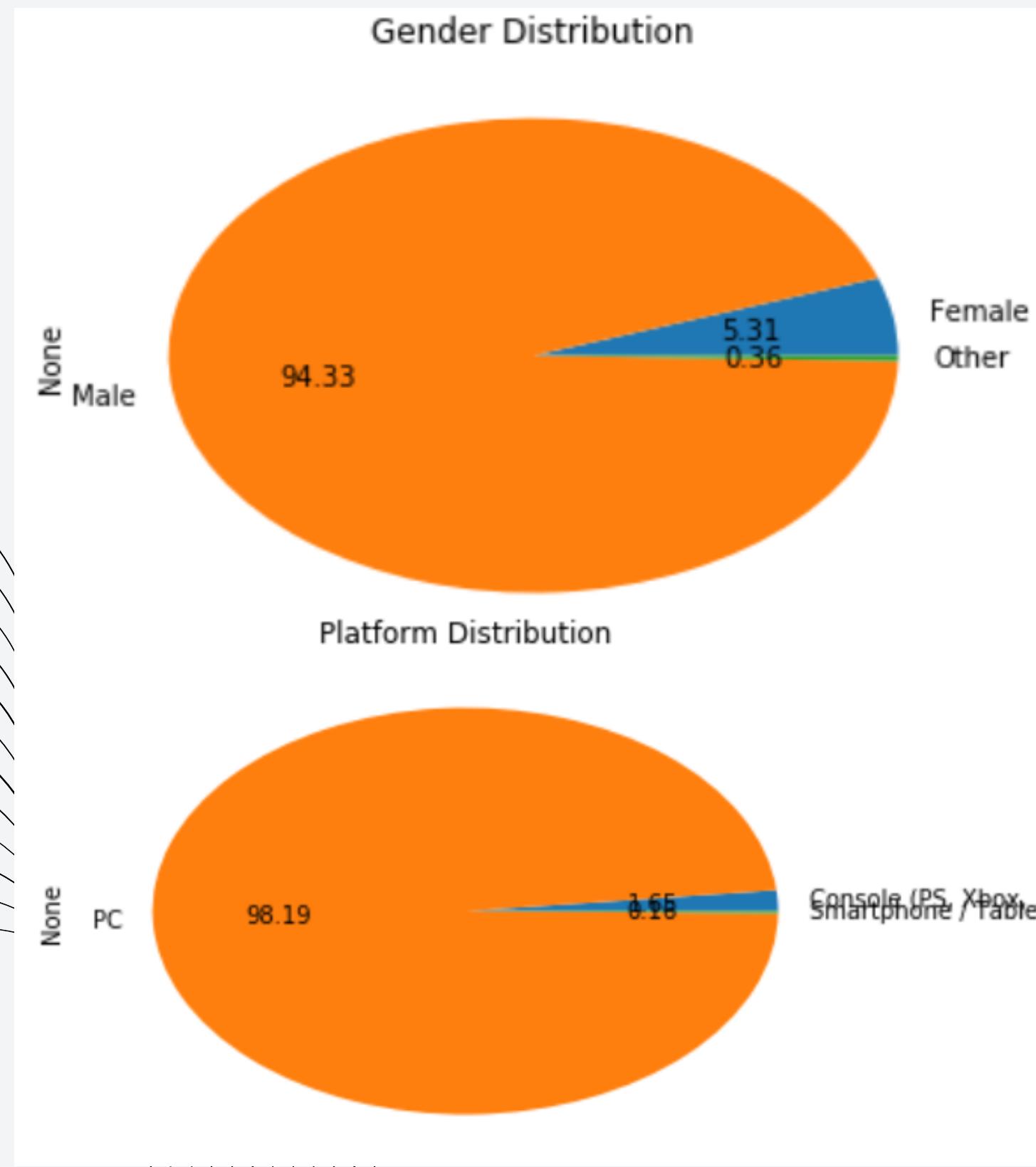
Numerical variables Cleaning

Descriptive Statistics of Numerical variables:

	Age	Hours	GAD_T	SWL_T	SPIN_T
count	13464.000000	13434.000000	13464.000000	13464.000000	12814.000000
mean	20.930407	22.247357	5.211973	19.788844	19.848525
std	3.300897	70.284502	4.713267	7.229243	13.467493
min	18.000000	0.000000	0.000000	5.000000	0.000000
25%	18.000000	12.000000	2.000000	14.000000	9.000000
50%	20.000000	20.000000	4.000000	20.000000	17.000000
75%	22.000000	28.000000	8.000000	26.000000	28.000000
max	63.000000	8000.000000	21.000000	35.000000	68.000000



DATA PREP AND DATA CLEANING PROCESS



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DATA PREP AND DATA CLEANING PROCESS

Categorical Data Cleaning

Before:

	earnings	whyplay	League	Degree	Playstyle
count	13464	13464	11626	13464	13464
unique	314	407	1455	5	298
top	I play for fun	having fun	Gold	High school diploma (or equivalent)	Multiplayer - online - with real life friends
freq	12112	5289	970	8560	5564

DATA PREP AND DATA CLEANING PROCESS

Categorical Data Cleaning

After:

League_clean

gold	3266
platinum	2692
Other	2359
silver	2283
diamond	1599
dtype:	int64

whyplay_clean

fun	5480
improving	4961
winning	2098
relaxing	655
Other	132
dtype:	int64

Playstyle_clean

Multiplayer - online - with real life friends	5603
Multiplayer - online - with strangers	4154
Multiplayer - online - with online acquaintances or teammates	2645
singleplayer	784
Other	155
dtype:	int64

ADDITIONAL EFFORTS

- Picked a large data with a lot of uncleaned data.
- Had to learn more about how the survey was built
- Tried working with geopandas
- Started working with R and later moved to python
- Had to learn a lot about GAD, SWL, and SPIN.

MOVING FORWARD

01

LINEAR
REGRESSION

02

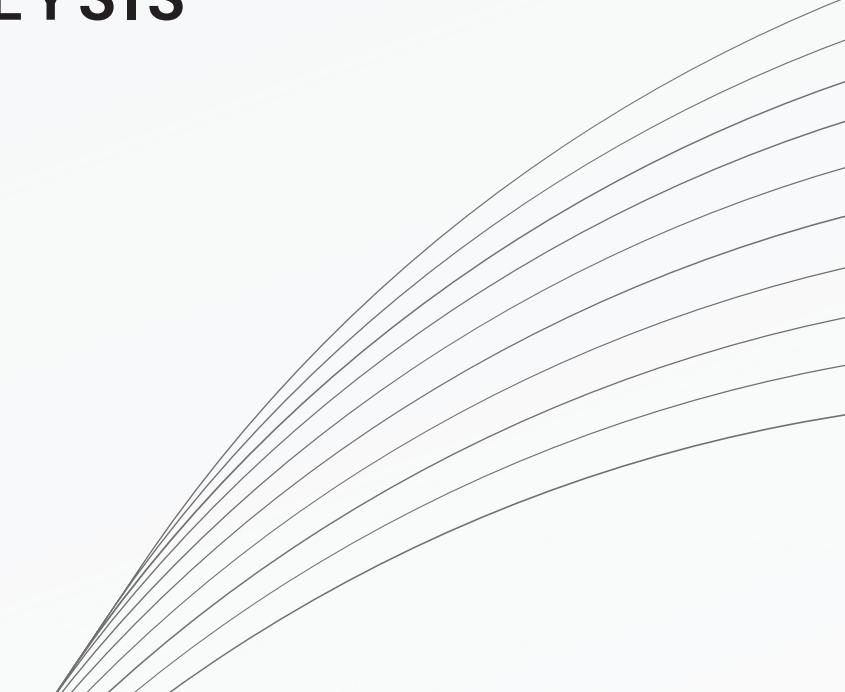
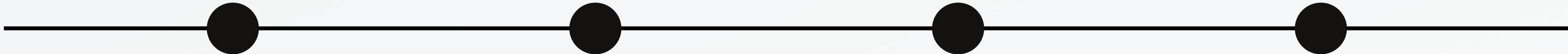
LOGISTIC
REGRESSION
AND
EVALUSTION
USING NAIVE
BAYES

03

DECISION
TREES AND
RANDOM
FORESTS

04

COMPARATIVE
ANALYSIS



THANK YOU