



# Online Gaming Behaviour Analytics

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# Introduction

The Online Gaming Behaviour Analytics project aims to analyze player behaviour, demographics, and purchasing patterns in the online gaming industry. This project helps gaming companies understand how players interact with games and what factors influence their engagement and spending habits.

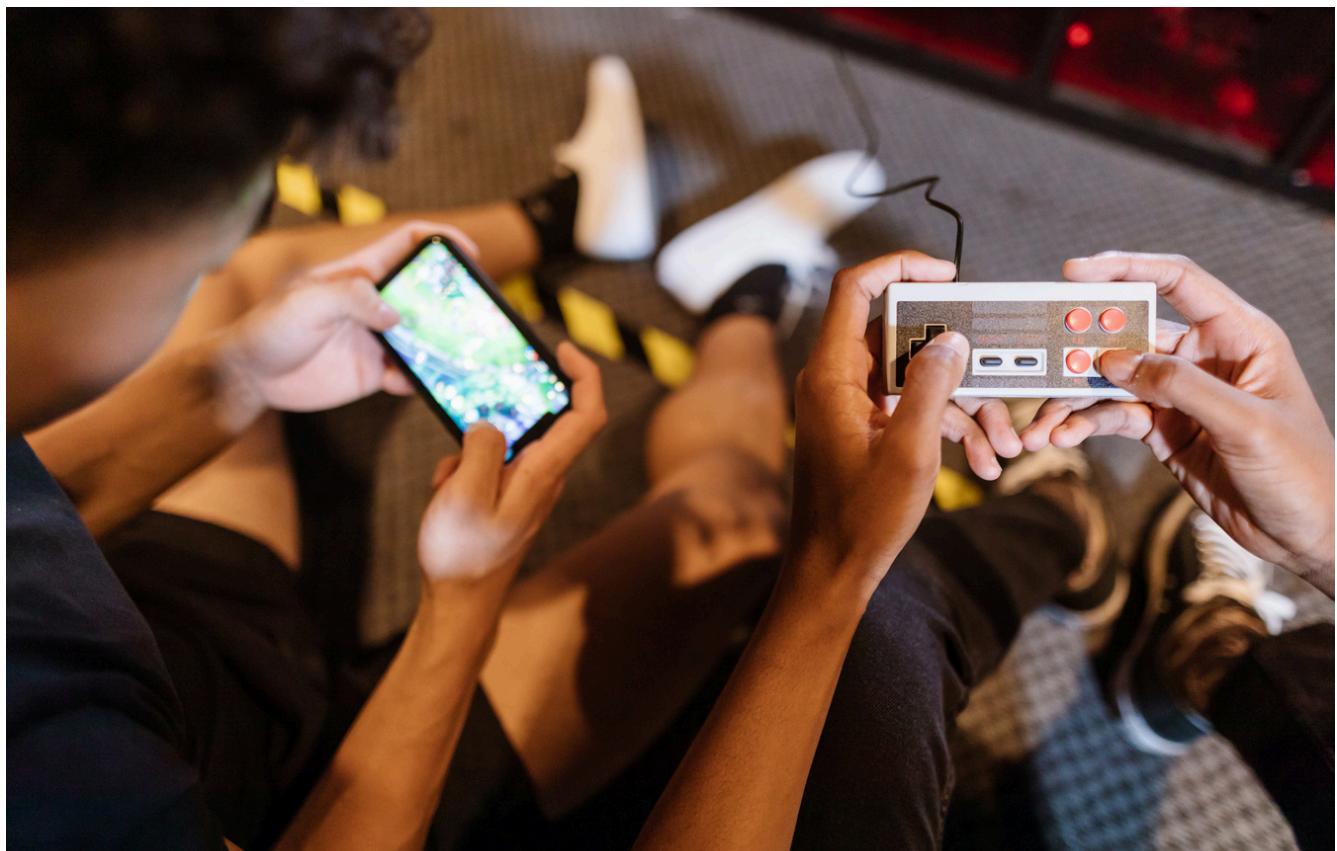
## ***Data-Driven Insights***

Leveraging comprehensive data analytics enables game developers to identify player preferences and behaviors, facilitating the creation of personalized gaming experiences that enhance engagement, retention, and overall player satisfaction.



# OBJECTIVE

- Understand player demographics (Gender, Region)
- Identify top game genres played
- Analyze engagement levels
- Correlate playtime with achievements
- Explore purchasing behaviour
- Automate EDL (Exploratory Data Analysis) process



# DATA CLEANING PROCESS

<b>Process</b>	<b>Technique</b>	<b>Tool Used</b>
Missing Values	Replaced with Mean/Mode	Power BI + Python
Duplicates	Removed	Power BI
Data Type Conversion	Date, Numbers	Power BI
Outlier Detection	Boxplot Method	Python
Standardization	Uppercase Text	Power BI

# VISUALIZATION TECHNIQUES

Visualization	Insight	Tool
Donut Chart	Player Demographics	Power BI
Bar Chart	Purchase Behaviour	Power BI
Line Chart	Sessions Per Week Analysis	Power BI
Scatter Plot	Play Time vs Achievements	Power BI
Treemap Chart	Players Locations	Power BI
Stacked Bar Chart	Game Difficulty Impact	Power BI

# AUTOMATION WITH PYTHON (EDL)

```
import pandas as pd  
import matplotlib.pyplot as plt  
import seaborn as sns  
  
# Load Data  
df = pd.read_csv('OnlineGaming.csv')
```



```
# Data Cleaning  
df.drop_duplicates(inplace=True)  
df.fillna(df.mean(), inplace=True)  
  
# Visualization  
plt.figure(figsize=(10, 6))  
sns.countplot(x='Gender', data=df,  
               palette='viridis')  
plt.title('Player Demographics')  
plt.show()
```



Online

# Data Visualization Insights

Visualization	Insight
Player Demographics Overview	Majority of players are Female (59.85%).
Players Location	Top locations: USA and Europe.
Top Game Genres Played	Most played genres: Sports and Action.
Play Time vs Achievements	Higher achievements in Action Games with lower playtime.
Engagement Level Analysis	High engagement found in 48% of players.
Purchase Behaviour	Strategy games have the highest in-game purchases.
Sessions Per Week Analysis	Most players have 10-12 sessions per week.
Game Difficulty Impact	Medium difficulty has the highest player engagement.

# Engagement Data Level (EDL)

Metric	Value
Total Players	40.03K
High Engagement	48%
Average Play Time	94 Hours
In-Game Purchases	10.2K Transactions
Popular Genre	Sports
Best Engagement Level	Medium

# DAX CODING IN POWER BI

1. Total Players Count:

TotalPlayers = COUNT('PlayerData'[PlayerID])

2. Engagement Percentage:

EngagementPercentage =

DIVIDE(

COUNT('PlayerData'[PlayerID]),

CALCULATE(COUNT('PlayerData'[PlayerID]),

ALL('PlayerData'))

)

3. Purchase Ratio:

PurchaseRatio =

DIVIDE(

SUM('PlayerData'[InGamePurchases]),

COUNT('PlayerData'[PlayerID]))

)

