RIOT GAMES

VALORANT

Streamers Influence

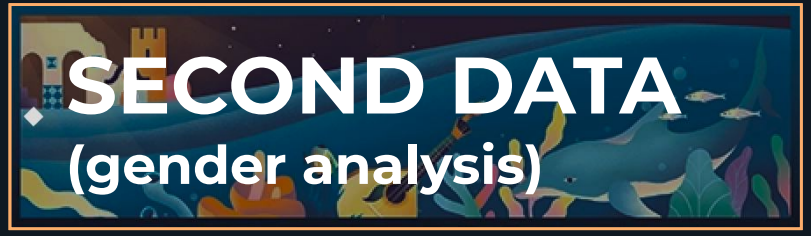
Data Research

DEFY
THE
LIMITS


VALORANT™
A 5v5 Character-Based Tactical Shooter

AGENDA

- **FIRST DATA**
  (viewers analysis)



- **SECOND DATA**
  (gender analysis)

- **SECOND DATA**
  (age analysis)

AGENDA

- **FIRST DATA**
  (viewers analysis)

SECOND DATA
(gender analysis)

SECOND DATA
(age analysis)

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FIRST DATA (Viewers & Players Count)

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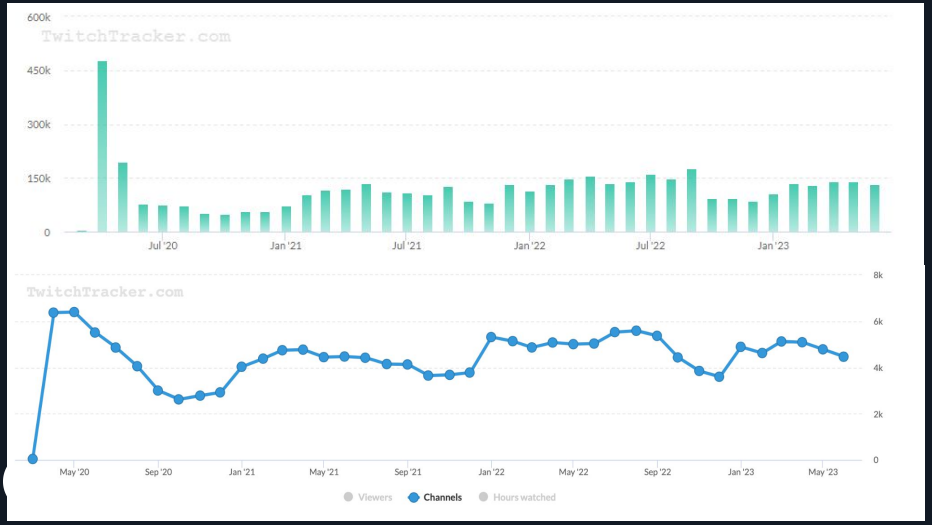
First (Our Findings)

22

First (Model Predictions)

Average Valorant Viewership and Channels on Twitch Per Month:



Valorant Player Count per Month:

Date	Players Count
June 2023	18,665,639
May 2023	19,834,991
April 2023	20,100,075
March 2023	20,124,255
February 2023	18,296,396
January 2023	18,886,523

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First

(Viewers and Player Count Graph)

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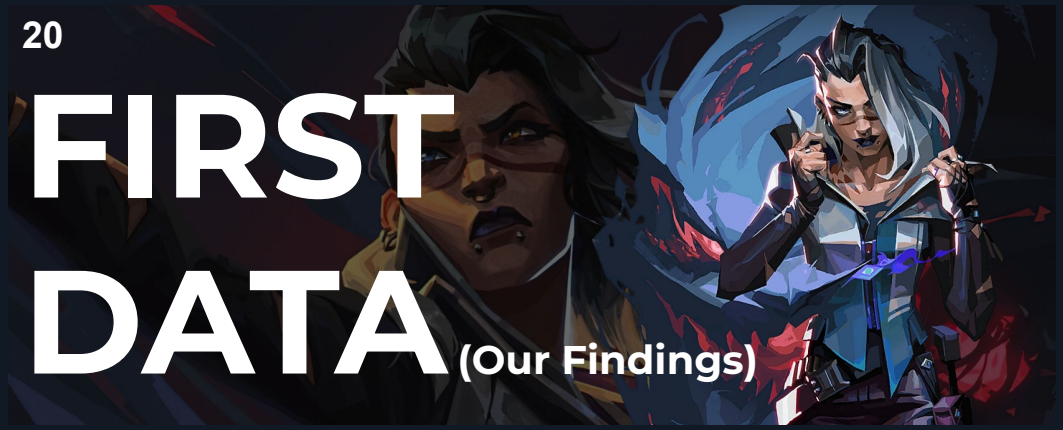
FIRST DATA (Our Findings)



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First

(Model Predictions)

```
In [15]: import pandas as pd
         import numpy as np
         import matplotlib.pyplot as plt

         data = pd.read_csv('players_viewers.csv')
         x = data['AverageView'].values.reshape(-1,1)
         y = data['Players'].values.reshape(-1,1)

         from sklearn.model_selection import train_test_split
         x_train, x_test, y_train, y_test = train_test_split(x, y, test_size = 0.25, random_state = 0)

         from sklearn.linear_model import LinearRegression
         ml = LinearRegression()
         ml.fit(x_train,y_train)

         # Predicting test set result
         y_predict = ml.predict(x_test)
         print(y_predict)
         ml.predict([[129000]])

         from sklearn.metrics import r2_score
         r2_score(y_test, y_predict)

         # Visualization of the training set results
         plt.scatter(y_test, y_predict)
         plt.xlabel('Actual Players')
         plt.ylabel('Predicted Players')
         plt.title('Actual vs. Predicted')
```

First Data Finding:

- Linear Regression
- Scikit-learn train test split data
- Test Size: 0.25, Random State: 0

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First

(Viewers and Player Count Graph)

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First

(Our Findings)

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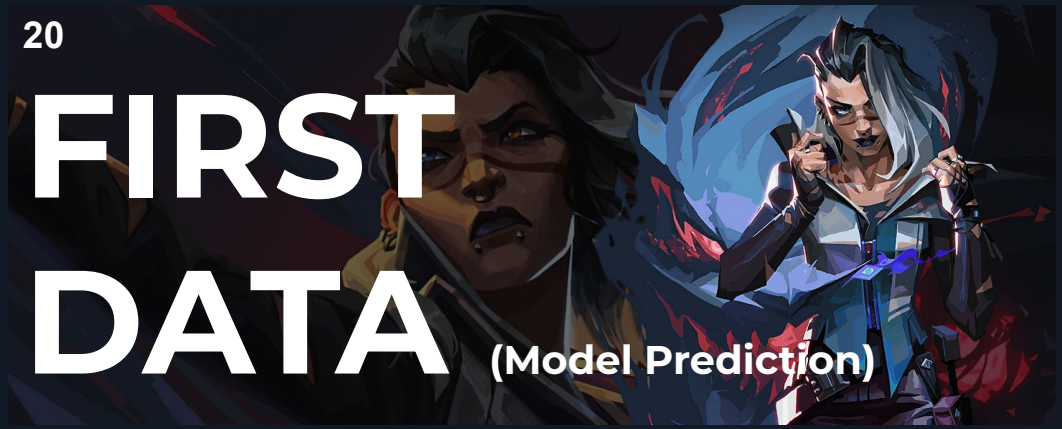
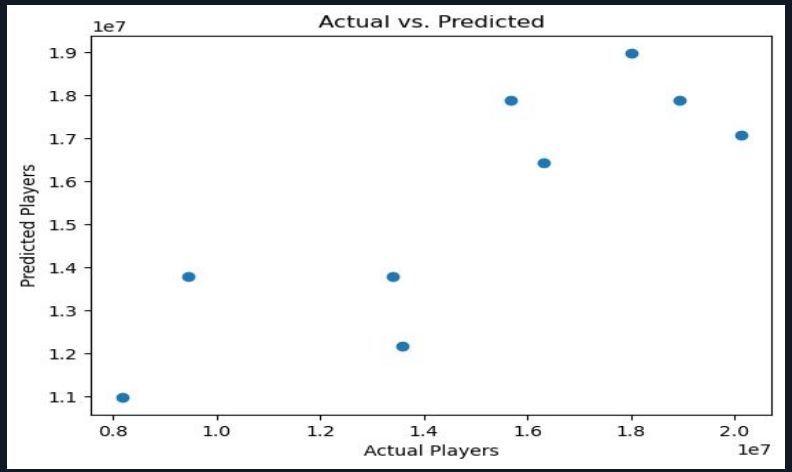


FIRST DATA (Model Prediction)

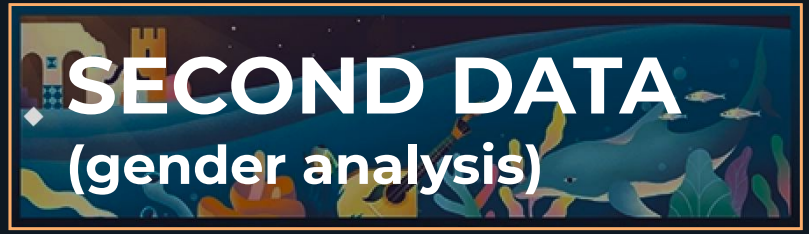


Predictions:

- If there are 129,000 average viewers, the average players would be around 17m
- If there are 141,000 average viewers, the average players would be 18m

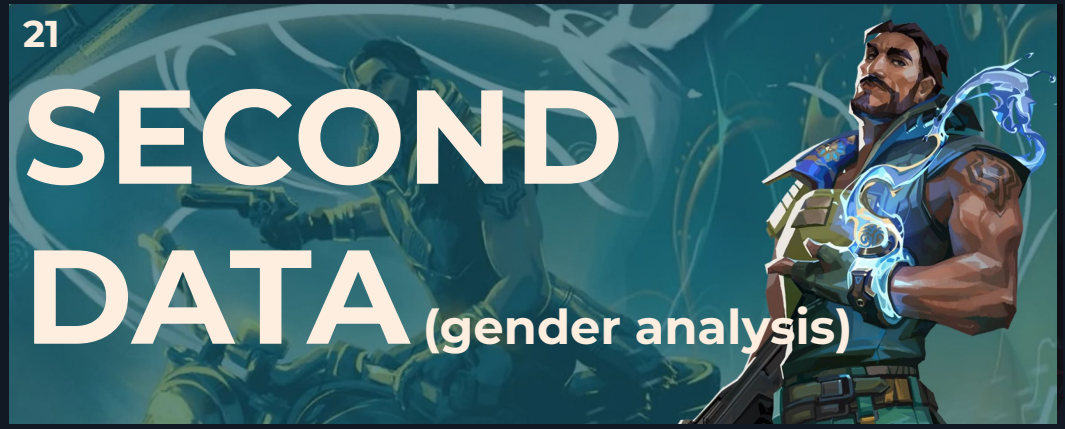
AGENDA

FIRST DATA
(viewers analysis)



SECOND DATA
(gender analysis)

SECOND DATA
(age analysis)



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Second
(Our Findings)

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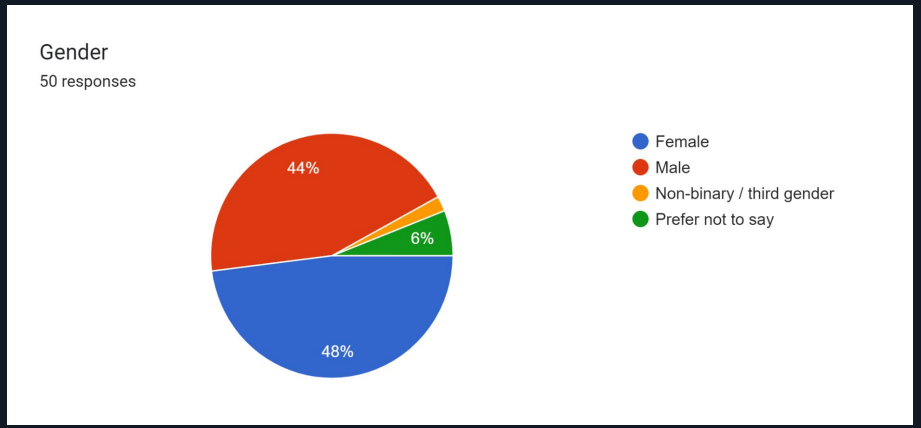
Second
(Model Predictions)

Data from Survey



	Gender	Age	watch_stream	was_influenced	game_influenced	play_regardless
2	Female	20-25	Yes	Yes	Valorant	No
3	Female	14-19	No	No	None	Yes
4	Female	20-25	Yes	Yes	Other	Yes
5	Female	20-25	Yes	Yes	Valorant	Yes
6	Female	20-25	Yes	Yes	Valorant	No
7	Male	20-25	Yes	Yes	Other	No
8	Male	14-19	Yes	Yes	Valorant	No
9	Male	14-19	Yes	Yes	Other	Yes
10	Female	20-25	Yes	No	Valorant	Yes
11	Male	20-25	Yes	Yes	Valorant	No
12	Male	20-25	Yes	Yes	Other	Yes
13	Female	20-25	Yes	Yes	Valorant	Yes
14	Female	14-19	Yes	Yes	Other	Yes
15	Male	26+	Yes	Yes	Valorant	No
16	Male	20-25	Yes	No	None	Yes
17	Female	20-25	Yes	No	Other	Yes
18	Male	26+	Yes	No	None	Yes
19	Female	20-25	Yes	No	None	Yes
20	Female	20-25	Yes	Yes	Valorant	Yes

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Second

(Gender Analysis)

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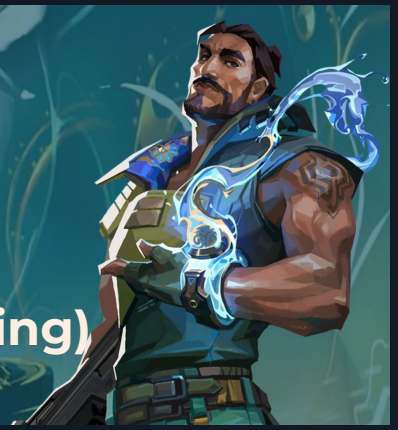
SECOND DATA (Our Finding)



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Second

(Model Prediction)

```
In [10]: import pandas as pd
df = pd.read_csv("streamers_influence_response.csv")
inputs = df.drop(['play_regardless', 'Age', 'game_influenced'], axis = 'columns')
target = df['game_influenced']

from sklearn.preprocessing import LabelEncoder
le_gender = LabelEncoder()
le_watch_stream = LabelEncoder()
le_was_influenced = LabelEncoder()
le_game_influenced = LabelEncoder()

inputs['Gender_n'] = le_gender.fit_transform(inputs['Gender'])
inputs['watch_stream_n'] = le_gender.fit_transform(inputs['watch_stream'])
inputs['was_influenced_n'] = le_gender.fit_transform(inputs['was_influenced'])
inputs.head()

inputs_n = inputs.drop(['Gender', 'watch_stream', 'was_influenced'], axis='columns')
inputs_n


from sklearn.model_selection import train_test_split
x_train, x_test, y_train, y_test = train_test_split(inputs_n, target, test_size = 0.25, random_state =

from sklearn import tree
model = tree.DecisionTreeClassifier()
model.fit(inputs_n, target)
model.score(inputs_n, target)
y_pred = model.predict(x_test)

from sklearn.metrics import accuracy_score
accuracy_score(y_test, y_pred)

Out[10]: 0.8461538461538461
```

Second Data Finding:

- Use Decision Tree
- Scikit-learn train test split data
- Test Size: 0.25, Random State: 0

Predictions:

For gender, there is an 84% chance that a player may be influenced by Content Creators

AGENDA

FIRST DATA
(viewers analysis)

SECOND DATA
(gender analysis)

SECOND DATA
(age analysis)

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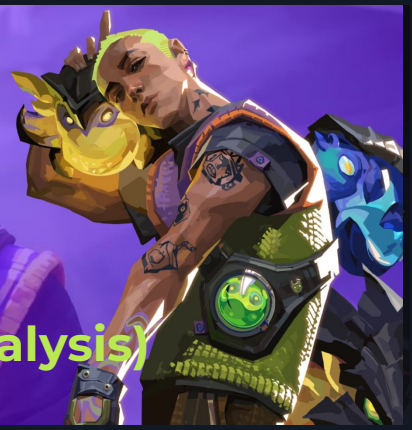
SECOND DATA (Age Analysis)



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Second (Our Findings)

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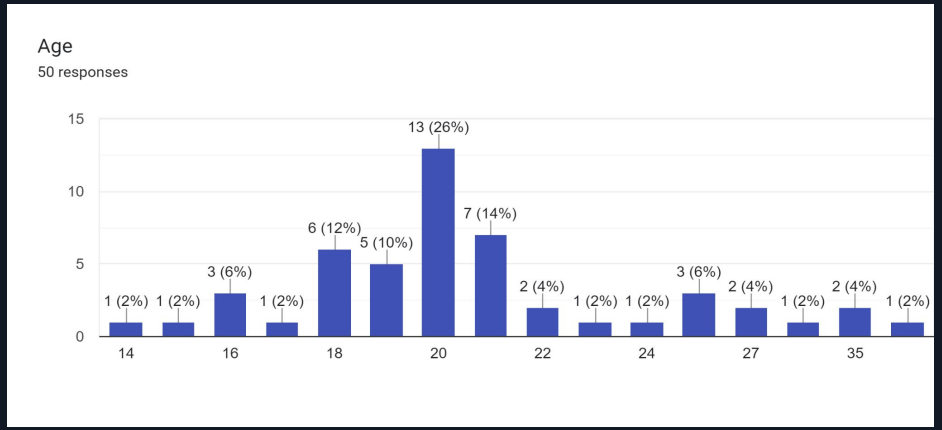
Second (Model Predictions)

Data from Survey



	Gender	Age	watch_stream	was_influenced	game_influenced	play_regardless
2	Female	20-25	Yes	Yes	Valorant	No
3	Female	14-19	No	No	None	Yes
4	Female	20-25	Yes	Yes	Other	Yes
5	Female	20-25	Yes	Yes	Valorant	Yes
6	Female	20-25	Yes	Yes	Valorant	No
7	Male	20-25	Yes	Yes	Other	No
8	Male	14-19	Yes	Yes	Valorant	No
9	Male	14-19	Yes	Yes	Other	Yes
10	Female	20-25	Yes	No	Valorant	Yes
11	Male	20-25	Yes	Yes	Valorant	No
12	Male	20-25	Yes	Yes	Other	Yes
13	Female	20-25	Yes	Yes	Valorant	Yes
14	Female	14-19	Yes	Yes	Other	Yes
15	Male	26+	Yes	Yes	Valorant	No
16	Male	20-25	Yes	No	None	Yes
17	Female	20-25	Yes	No	Other	Yes
18	Male	26+	Yes	No	None	Yes
19	Female	20-25	Yes	No	None	Yes
20	Female	20-25	Yes	Yes	Valorant	Yes

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Second

(Gender Analysis)

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22

Second

(Model Prediction)

```
In [17]: import pandas as pd
         df = pd.read_csv("streamers_influence_age.csv")
         inputs = df.drop(['play_regardless', 'Gender', 'game_influenced'], axis = 'columns')
         target = df['game_influenced']

         from sklearn.preprocessing import LabelEncoder
         le_age = LabelEncoder()
         le_watch_stream = LabelEncoder()
         le_was_influenced = LabelEncoder()
         le_game_influenced = LabelEncoder()

         inputs['Age_n'] = le_age.fit_transform(inputs['Age'])
         inputs['watch_stream_n'] = le_age.fit_transform(inputs['watch_stream'])
         inputs['was_influenced_n'] = le_age.fit_transform(inputs['was_influenced'])
         inputs.head()

         inputs_n = inputs.drop(['Age', 'watch_stream', 'was_influenced'], axis='columns')
         inputs_n

         from sklearn.model_selection import train_test_split
         x_train, x_test, y_train, y_test = train_test_split(inputs_n, target, test_size = 0.25, random_state =

         from sklearn import tree
         model = tree.DecisionTreeClassifier()
         model.fit(inputs_n, target)
         model.score(inputs_n, target)
         y_pred = model.predict(x_test)

         from sklearn.metrics import accuracy_score
         accuracy_score(y_test, y_pred)

Out[17]: 0.6923076923076923
```

Second Data Finding:

- Use Decision Tree

Predictions:

For age, there is an 69% chance that a player may be influenced by Content Creators

CONCLUSIONS

- There is a correlation between viewers and players based
- Age: older age were less likely to be influenced.
- Gender: the different groups had about the same influence.

REFERENCES

- Twitch Valorant Viewership Counts:
  - https://twitchtracker.com/games/516575
- Valorant Players Counts:
  - https://tracker.gg/valorant/population
- Research Survey
  - https://docs.google.com/forms/d/1g71FmDLDZDxJ0Je7Wve4eSkN0OY2hD9Ou4yXzTP5Oys/edit#responses
- Slide Template
  - https://www.dropbox.com/s/1akk9p8bfu9ifva/VALORANT%20PowerPoint_adjusted.pptx?dl=0