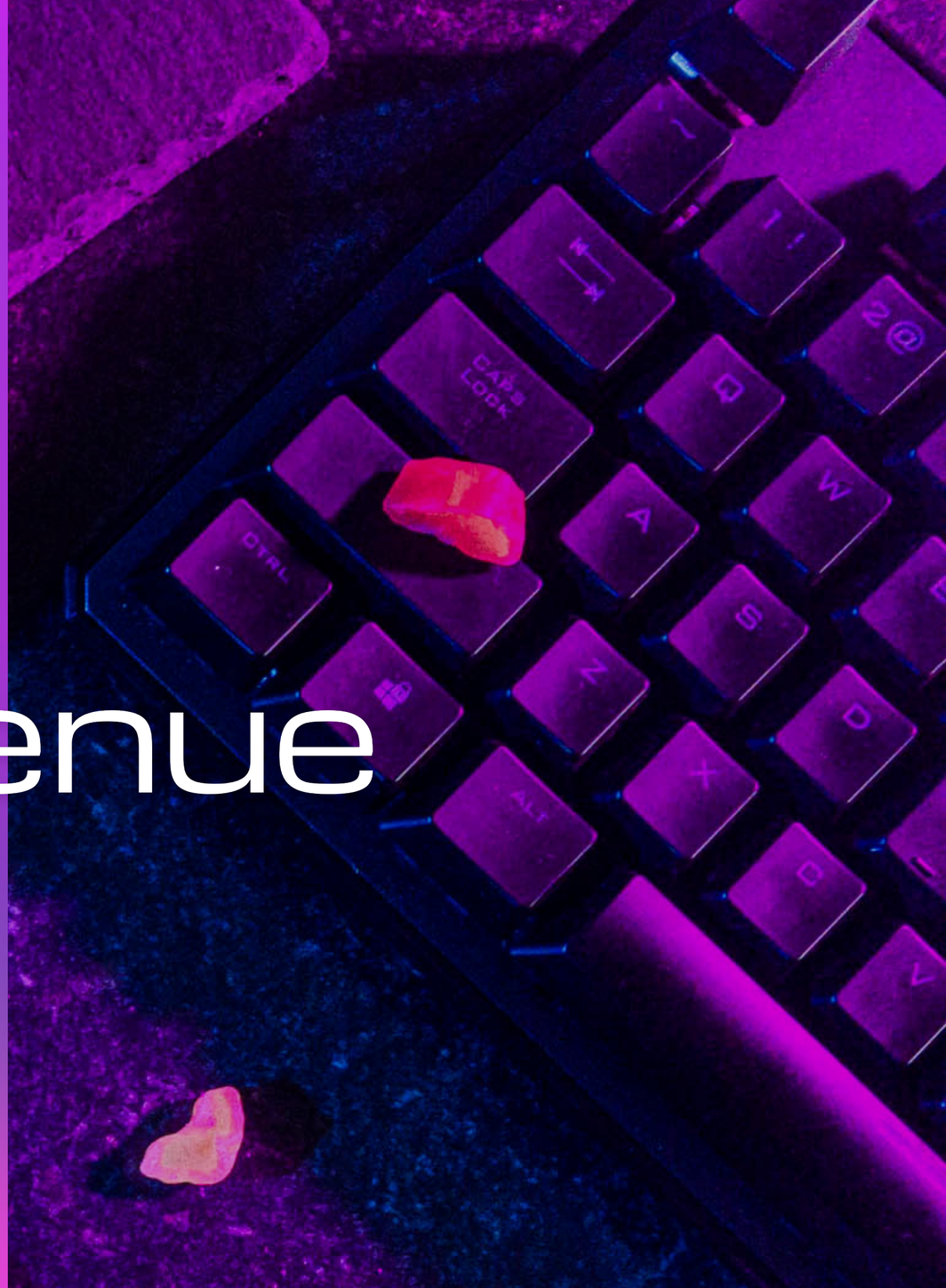
AICORE

Maximising Esports Revenue

Using classification



The goal is to target, games publishers, sponsors and Twitch to show how we could maximise their profits.

GLOBAL ESPORTS REVENUES WILL GROW TO $1.084BN IN 2021, A YEAR-ON-YEAR RISE OF 14.5% FROM $947.1 MILLION IN 2020.

SOURCE: **HTTPS://ESPORTS-NEWS.CO.UK**

TARGETING SPONSORSHIP DEALS

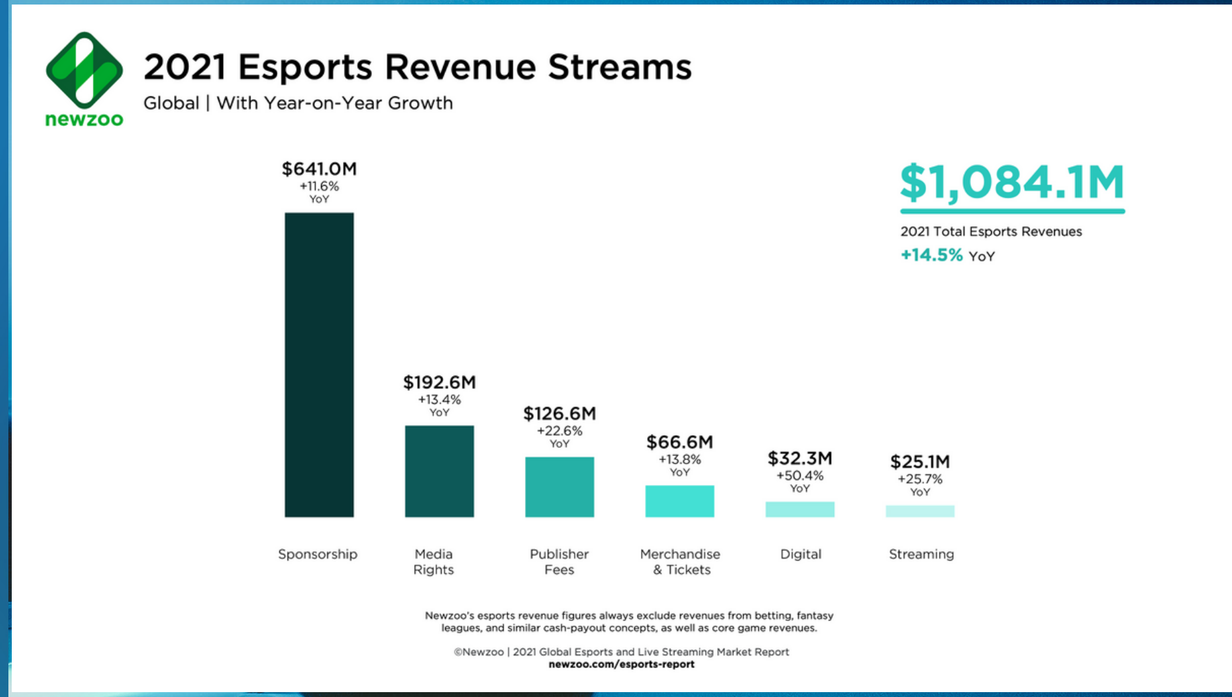
Given a threshold of viewers we can determine the location and the tournament length that would maxmise profits.

PUBLISHER FEES

Show that the tournament has an impact in their player figures. Publishers might be willing to contribute to prize pool and promote the tournament in game.

STREAMING

Determine the location that would maximise Twitch viewer numbers. Getting twitch onbaord would increase their revenue and have the tournament featured on the front page.



Predictors

Sponsorship deals

Date
Prize Pool
Game
Minimum number of viewers

Publishers

Date
Prize Pool
Location
Game
Tour days

Twitch

Date
Prize Pool
Location
Tour days

Targets

Location
Tour days

Player Gain

Twitch Viewers

How machine learning can help

LOCATION

68 country currently maybe need to reduce the countries into continents giving 6 classes.

TWITCH VIEWERS

KPI set by twitch to gain a certain amount of viewers = increasd ad revenue.

Threshold be determined with binary classfication.

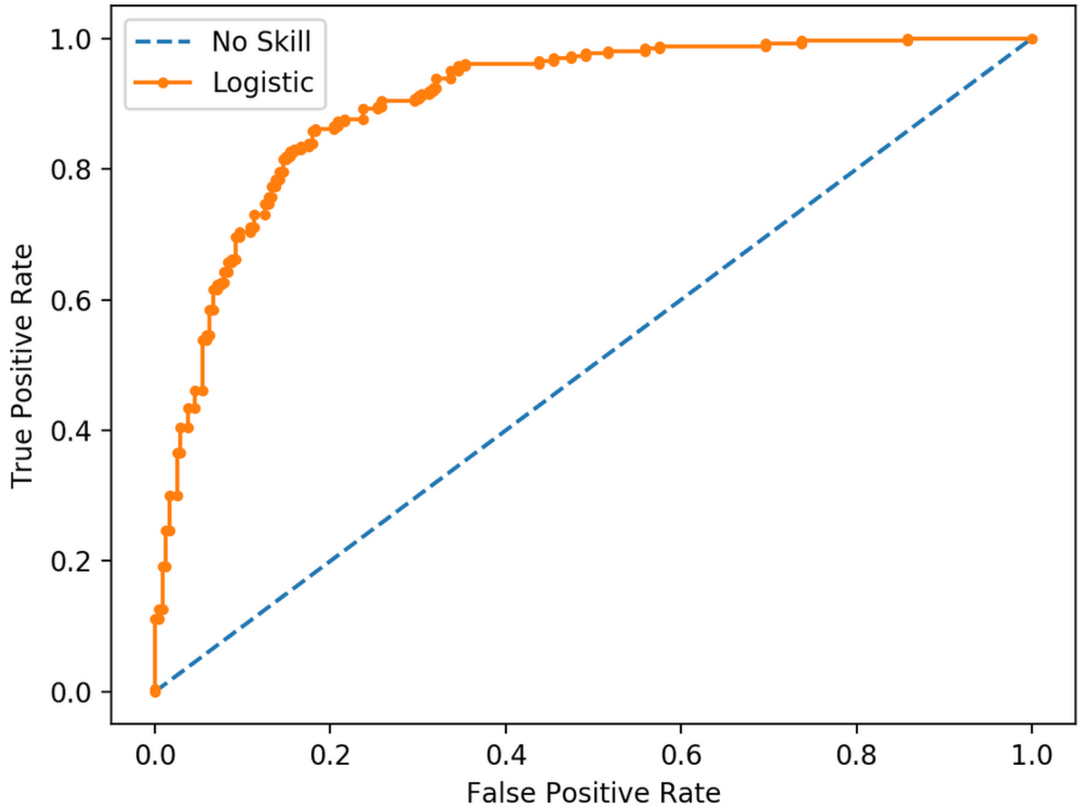
PLAYER GAIN

Binary classifcation.

Threshold of players will be set by the KPI required of the shakeholder = increased microtransaction/subscriptions.

EVALUATION

Model will be evaluated using a ROC curve.



Goal was to use a logistic classification model to predict where to stage a tournament which would guarantee a least 10000 viewers.

Initial predictions

CHOOSE ACCURACY AS THE PREDICTIOR

Tournament host would be most intersted in whether this tournament was likely to make money.

TRIED LOGISTIC REGRESSION AND DECISION TREES INITIALLY AS THE BENCHMARK

Logisitic regression accuracy: 0.70473
Decision trees accuracy: 0.6998

Logistic regression gave better results in this case.

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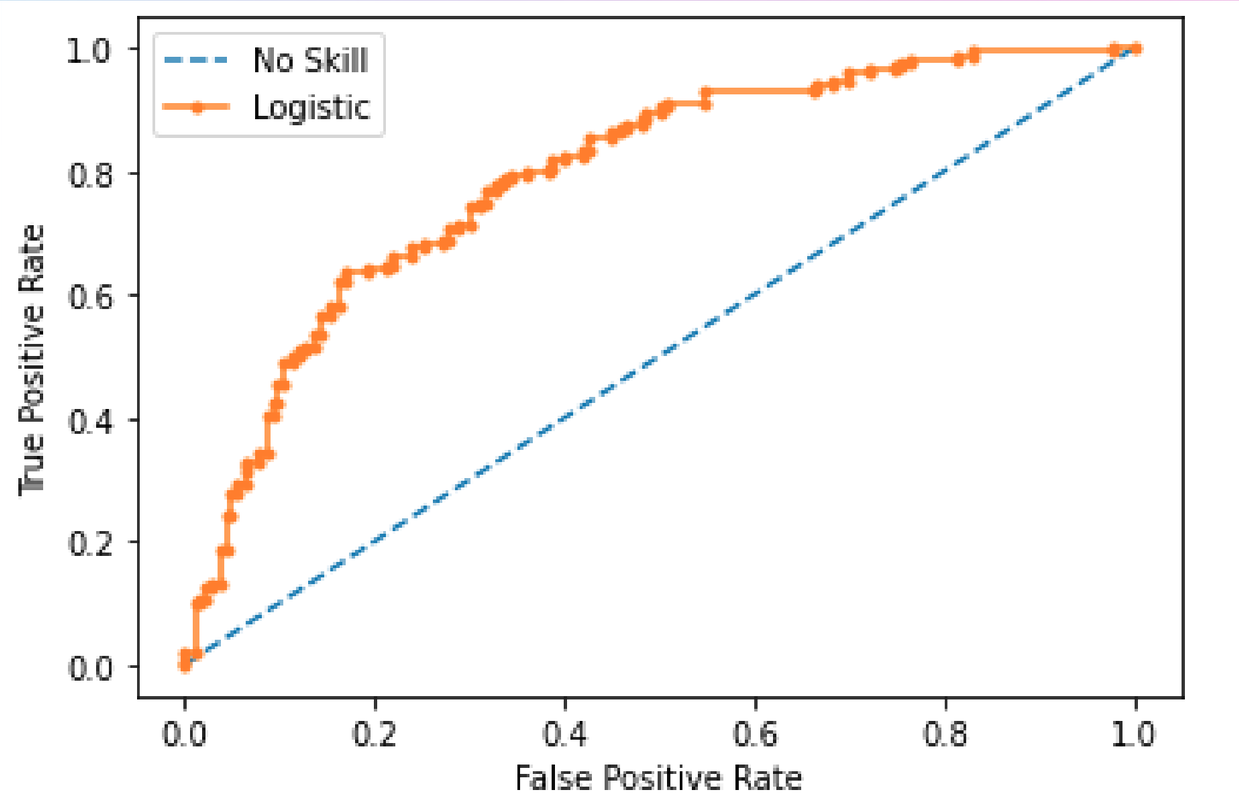
Model Scoring and optimisation.

After optimising the threshold accuracy improved to 0.7072 a gain of 0.0025.

Results of test scores: 0.72 on the test set.

0.719 on the cross validation set.



Logistic: ROC AUC=0.793

Analysing the coefficients

Logit Regression Results

Dep. Variable:	Twitch_gain	No. Observations:	1176
Model:	Logit	Df Residuals:	1171
Method:	MLE	Df Model:	4
Date:	Mon, 14 Jun 2021	Pseudo R-squ.:	0.1871
Time:	17:58:49	Log-Likelihood:	-662.49
converged:	True	LL-Null:	-814.97
Covariance Type:	nonrobust	LLR p-value:	9.238e-65

	coef	std err	z	P>|z|	[0.025	0.975]
const	-3.9843	0.453	-8.790	0.000	-4.873	-3.096
Tour_days	0.3560	0.065	5.451	0.000	0.228	0.484
Twitch_Viewers	5.4e-06	1.2e-06	4.494	0.000	3.04e-06	7.76e-06
Prize_Pool	0.1574	0.028	5.698	0.000	0.103	0.211
DateTime	-0.0303	0.020	-1.539	0.124	-0.069	0.008

How the model can be used

User can enter the month, prize pool amount, the amount of tournament days the tournament would run for and the amount of previous years twitch viewers and get an indication of whether the tournament would result in 10000+ viewers.