



Business Analysis of Ultimate Clipper Pass

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Business Analysis

01

**Future Strategy:
expanding the UCP
product**

02

**Prediction Model of
UCP member
attendance**

Future Strategy: expanding the UCP product

Expanding the bundle from 35 games to 41 games

What are Goals for expanding UCP?

- Profit
- Customer Loyalty
- Branding

...

Future Strategy: expanding the UCP product

Profit Oriented

Are we making profits now on UCP?

$$\text{Profit} = \text{UCP Attendance/game} * (\text{UCP price/game} - \text{Single price/game})$$



UCP Price/game

- $\$350/35 = \$10?$
- One cannot attend all 35 games
- Average attendance of members: 10
- Average price they are paying each game: ...
 - $\$350/10 \sim \35

Future Strategy: expanding the UCP product

Profit Oriented

Attendance with UCP/game	UCP Price/game	Single Attendance/game	Single Price/game
142	\$35	1992	\$33

[UCP Attendance/game * (UCP price/game - Single price/game)] * number of games

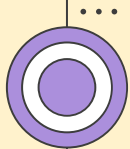
142

\$35-\$33 = \$2

35

\$9940

We are making profits on UCP seats!



Future Strategy: expanding the UCP product

Profit Oriented

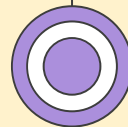
How much profit can we make?

- Numbers of UCP membership we can sell
 - Prediction model
 - Use the past growth
 - Survey to UCP members

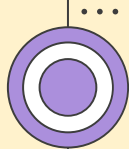
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Future Strategy: expanding the UCP product

Profit Oriented

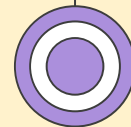
How much will the strategy cost?

- How many UCP members will watch top-tier games:
 - $(\text{Current Price of UCP Top-Tier Games} - \text{Future UCP price}) * \text{UCP attendance/game}$
- Future UCP price
 - Prediction model

Profit

Cost

...



Future Strategy: expanding the UCP product

Customer Management/Brading

Customer Loyalty

- Survey to current UCP members

Potential Customers

- Sentiment Analysis on the social media
- Survey to potential customers

...

Future Strategy: expanding the UCP product

Customer Management/Branding

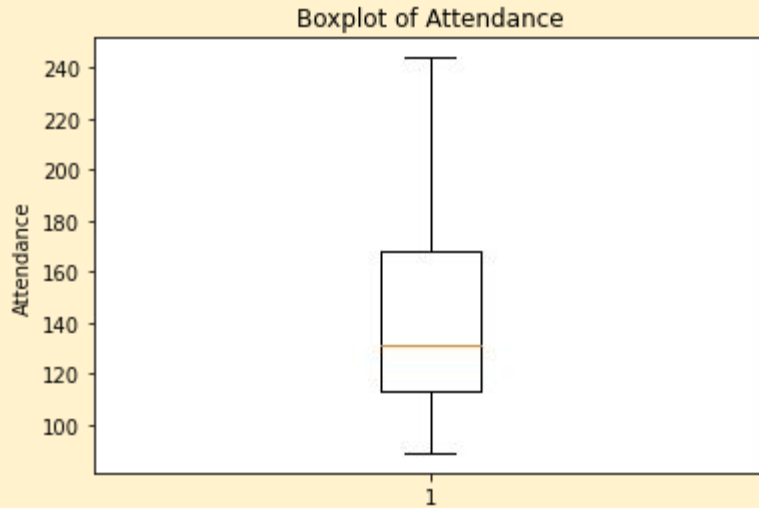
Branding

- How people think about our league
 - Improve attendance -> good branding
 - Awesome UCP membership
- Utilize the fame of these top-tier leagues: Potential Fans
 - Mechanizm: Can choose one top-tier game with a high discount if you watched more than 3 of our games
 - Use credits: can be obtained from other activities

...

Part 2: Prediction model

Explore the UCP attendance data



Statistic	Value
Mean	141.794118
Median	131.000000
Standard Deviation	40.090177
Variation	1607.222318
Interquartile Range	55.000000
IQ1	113.250000
IQ3	168.250000

Part 2: Prediction model

Feature Selection



Fame of Opponent

Maybe more people will attend if the opponent is famous



Home Stands

People might participate more if it is a homestand game



Weather

Windy, rainy, snowy



Saturday & Friday

People would be more free on Sat & Fri.



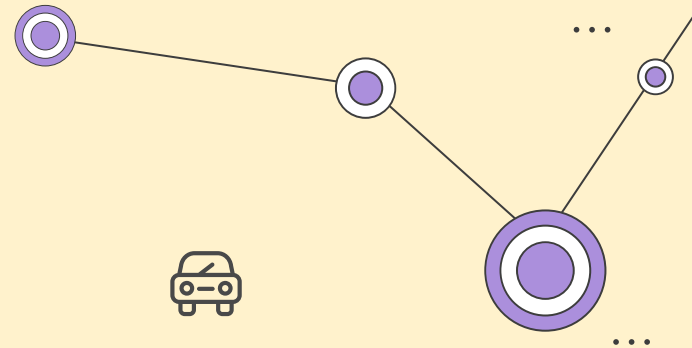
Win Stands

If there were 2 or more consecutive game won



Evening

If it is an evening game or not



Part 2: Prediction model

Model Selection

Model	Root Mean Squared Error
Ridge Regression	37.2
Linear Regression	38.2
Gradient Boost	55.28
Decision Tree	55.45
Random Forest	47.5

Maybe because of
some features

Part 2: Prediction model

Feature Selection

	coef	std err	t	P> t	[0.025	0.975]
Intercept	126.7226	27.999	4.526	0.000	69.169	184.276
Evening	10.3710	19.725	0.526	0.603	-30.174	50.916
WindSpeed	-0.4470	1.604	-0.279	0.783	-3.745	2.851
Precip	0.4033	1.063	0.379	0.707	-1.782	2.589
Snow	7.66e-14	7.11e-14	1.077	0.292	-6.96e-14	2.23e-13
Friday_or_Saturday	8.0959	18.734	0.432	0.669	-30.413	46.605
Home_Stand	-2.8215	16.671	-0.169	0.867	-37.090	31.447
fame_opponent	10.1828	15.687	0.649	0.522	-22.063	42.429
Win_Stand	21.6741	17.587	1.232	0.229	-14.476	57.824

Method to Boost Accuracy

- **Cross-validation:**
 - Create validation sets, imitating test sets
 - Circle around each time
 - Train the model on different subset
- **Bootstrap:**
 - A way to resampling
 - Generate different samples each time based on the data we have
- **Result:**
 - Cross-validation: RMSE to 37.1
 - Cross-validation & Bootstrap: RMSE to 42.8
 - Prediction: **141.6**: Portland Trail Blazers

Conclusion: Business Insights

- **Future Strategy of UCP**
 - Instead just include the top-tier games, we can use them for branding and also boosting customers' loyalty.
- **Prediction Model:**
 - Need more data: advertising data
 - Focus on important features: win stand, Saturday & Friday
 - Difference between Reservation and Scans ...