

UFC RESEARCH QUESTION 1 LOG TRANSFORM

Due 5th December, 2024

```
# Import the CSV into R
ufc <- read.csv("ufc-master.csv")

# View the data
head(ufc)
```

	RedFighter	BlueFighter	RedOdds	BlueOdds	RedExpectedValue
1	Brandon Moreno	Amir Albazi	-180	150	55.5556
2	Erin Blanchfield	Rose Namajunas	-155	130	64.5161
3	Caio Machado	Brendson Ribeiro	-192	160	52.0833
4	Ariane da Silva	Jasmine Jasudavicius	190	-250	190.0000
5	Marc-Andre Barriault	Dustin Stoltzfus	-270	220	37.0370
6	Mike Malott	Trevin Giles	-375	295	26.6667
	BlueExpectedValue	Date	Location	Country	Winner
1	150	2024-11-02	Edmonton, Alberta, Canada	Canada	Red
2	130	2024-11-02	Edmonton, Alberta, Canada	Canada	Red
3	160	2024-11-02	Edmonton, Alberta, Canada	Canada	Blue
4	40	2024-11-02	Edmonton, Alberta, Canada	Canada	Blue
5	220	2024-11-02	Edmonton, Alberta, Canada	Canada	Blue
6	295	2024-11-02	Edmonton, Alberta, Canada	Canada	Red
	TitleBout	WeightClass	Gender	NumberOfRounds	BlueCurrentLoseStreak
1	False	Flyweight	MALE	5	0
2	False	Women's Flyweight	FEMALE	3	0
3	False	Light Heavyweight	MALE	3	2
4	False	Women's Flyweight	FEMALE	3	0
5	False	Middleweight	MALE	3	1
6	False	Welterweight	MALE	3	2
	BlueCurrentWinStreak	BlueDraws	BlueAvgSigStrLanded	BlueAvgSigStrPct	
1	5	0	2.72	0.34	

2	2	0	3.71	0.42	
3	0	0	3.16	0.42	
4	2	0	3.70	0.44	
5	0	0	3.47	0.44	
6	0	0	3.17	0.54	
	BlueAvgSubAtt	BlueAvgTDLanded	BlueAvgTDPct	BlueLongestWinStreak	BlueLosses
1	0.5	1.39	0.32	5	0
2	0.4	1.46	0.50	3	5
3	0.4	1.27	0.50	1	2
4	0.6	2.50	0.43	2	2
5	1.1	2.31	0.41	1	5
6	0.3	1.07	0.50	3	6
	BlueTotalRoundsFought	BlueTotalTitleBouts	BlueWinsByDecisionMajority		
1	13	0		0	
2	52	7		0	
3	5	0		0	
4	24	0		0	
5	17	0		0	
6	32	0		0	
	BlueWinsByDecisionSplit	BlueWinsByDecisionUnanimous	BlueWinsByKO		
1	1	1	1	1	
2	2	4	2		
3	0	0	1	1	
4	0	5	0		
5	0	1	1	1	
6	2	2	3		
	BlueWinsBySubmission	BlueWinsByTKODoctorStoppage	BlueWins	BlueStance	
1	2	0	5	Orthodox	
2	3	0	11	Orthodox	
3	0	0	1	Orthodox	
4	1	0	6	Orthodox	
5	1	0	3	Orthodox	
6	0	0	7	Orthodox	
	BlueHeightCms	BlueReachCms	BlueWeightLbs	RedCurrentLoseStreak	
1	165.10	172.72	125	2	
2	165.10	165.10	125	1	
3	190.50	205.74	205	2	
4	170.18	172.72	125	1	
5	182.88	190.50	185	2	
6	182.88	187.96	170	1	
	RedCurrentWinStreak	RedDraws	RedAvgSigStrLanded	RedAvgSigStrPct	RedAvgSubAtt
1	0	2	3.99	0.43	0.4
2	0	0	5.24	0.44	0.8

3	0	0	5.82	0.53	0.0		
4	0	0	4.04	0.41	0.3		
5	0	0	5.98	0.47	0.1		
6	0	0	3.85	0.46	0.8		
	RedAvgTDLanded	RedAvgTDPct	RedLongestWinStreak	RedLosses	RedTotalRoundsFought		
1	1.59	0.46	3	5	53		
2	1.86	0.31	6	1	19		
3	0.00	0.00	1	2	9		
4	0.52	0.55	3	6	29		
5	0.21	0.25	2	7	31		
6	2.27	0.56	4	1	8		
	RedTotalTitleBouts	RedWinsByDecisionMajority	RedWinsByDecisionSplit				
1	6	0		1			
2	0	0		0			
3	0	0		0			
4	0	0		1			
5	0	0		0			
6	0	0		0			
	RedWinsByDecisionUnanimous	RedWinsByKO	RedWinsBySubmission				
1	2	3		3			
2	3	0		3			
3	1	0		0			
4	3	0		2			
5	2	2		1			
6	0	1		3			
	RedWinsByTKODoctorStoppage	RedWins	RedStance	RedHeightCms	RedReachCms		
1	0	9	Orthodox	170.18	177.80		
2	0	6	Orthodox	162.56	167.64		
3	0	1	Southpaw	193.04	198.12		
4	0	6	Orthodox	167.64	170.18		
5	0	5	Orthodox	185.42	187.96		
6	0	4	Orthodox	185.42	185.42		
	RedWeightLbs	RedAge	BlueAge	LoseStreakDif	WinStreakDif	LongestWinStreakDif	
1	125	30	31	-2	5	2	
2	125	25	32	-1	2	-3	
3	250	30	28	0	0	0	
4	125	30	35	-1	2	-1	
5	185	34	32	-1	0	-1	
6	170	32	32	1	0	-1	
	WinDif	LossDif	TotalRoundDif	TotalTitleBoutDif	KODif	SubDif	HeightDif
1	-4	-5	-40		-6	-2	-5.08
2	5	4	33		7	2	2.54
3	0	0	-4		0	1	-2.54

4	0	-4	-5	0	0	-1	2.54
5	-2	-2	-14	0	-1	0	-2.54
6	3	5	24	0	2	-3	-2.54
	ReachDif	AgeDif	SigStrDif	AvgSubAttDif	AvgTDDif	EmptyArena	BMatchWCRank
1	-5.08	1	-1.27	0.1	-0.20	NA	3
2	-2.54	7	-1.53	-0.4	-0.40	NA	5
3	7.62	-2	-2.66	0.4	1.27	NA	NA
4	2.54	5	-0.34	0.3	1.98	NA	14
5	2.54	-2	-2.51	1.0	2.10	NA	NA
6	2.54	0	-0.68	-0.5	-1.20	NA	NA
	RMatchWCRank	RWFlyweightRank	RWFeatherweightRank	RWStrawweightRank			
1	2	NA	NA	NA	NA		
2	3	3	NA	NA	NA		
3	NA	NA	NA	NA	NA		
4	13	13	NA	NA	NA		
5	NA	NA	NA	NA	NA		
6	NA	NA	NA	NA	NA		
	RWBantamweightRank	RHeavyweightRank	RLightHeavyweightRank	RMiddleweightRank			
1	NA	NA	NA	NA	NA		
2	NA	NA	NA	NA	NA		
3	NA	NA	NA	NA	NA		
4	NA	NA	NA	NA	NA		
5	NA	NA	NA	NA	NA		
6	NA	NA	NA	NA	NA		
	RWelterweightRank	RLightweightRank	RFeatherweightRank	RBantamweightRank			
1	NA	NA	NA	NA	NA		
2	NA	NA	NA	NA	NA		
3	NA	NA	NA	NA	NA		
4	NA	NA	NA	NA	NA		
5	NA	NA	NA	NA	NA		
6	NA	NA	NA	NA	NA		
	RFlyweightRank	RPFPRank	BWFlyweightRank	BWFeatherweightRank	BWStrawweightRank		
1	2	NA	NA	NA	NA		
2	NA	7	5	NA	NA		
3	NA	NA	NA	NA	NA		
4	NA	NA	14	NA	NA		
5	NA	NA	NA	NA	NA		
6	NA	NA	NA	NA	NA		
	BWBantamweightRank	BHeavyweightRank	BLightHeavyweightRank	BMiddleweightRank			
1	NA	NA	NA	NA	NA		
2	NA	NA	NA	NA	NA		
3	NA	NA	NA	NA	NA		
4	NA	NA	NA	NA	NA		

5	NA	NA	NA	NA	NA
6	NA	NA	NA	NA	NA
	BWelterweightRank	BLightweightRank	BFeatherweightRank	BBantamweightRank	
1	NA	NA	NA	NA	NA
2	NA	NA	NA	NA	NA
3	NA	NA	NA	NA	NA
4	NA	NA	NA	NA	NA
5	NA	NA	NA	NA	NA
6	NA	NA	NA	NA	NA
	BFlyweightRank	BPFPRank	BetterRank	Finish	FinishDetails
1	3	NA	Red	U-DEC	5
2	NA	6	Red	U-DEC	5
3	NA	NA	neither	S-DEC	3
4	NA	NA	Red	SUB	D'Arce Choke
5	NA	NA	neither	KO/TKO	Punch
6	NA	NA	neither	U-DEC	3
	FinishRoundTime	TotalFightTimeSecs	RedDecOdds	BlueDecOdds	RSubOdds
1	5:00	1500	130	215	800
2	5:00	1500	140	180	450
3	5:00	900	300	500	800
4	2:28	748	300	-110	2000
5	4:28	268	150	350	1800
6	5:00	900	275	550	215
	RKOdds	BKOdds			BSubOdds
1	400	1600			
2	1600	650			
3	200	350			
4	800	750			
5	225	800			
6	240	650			

```

filtered_ufc_blue = ufc[!is.na(ufc$BlueAvgSigStrLanded),
                      c("BlueReachCms", "BlueAvgSigStrLanded", "WeightClass")]
colnames(filtered_ufc_blue) <- c("ReachCms", "AvgSigStrLanded", "WeightClass")
filtered_ufc_red = ufc[!is.na(ufc$RedAvgSigStrLanded),
                      c("RedReachCms", "RedAvgSigStrLanded", "WeightClass")]
colnames(filtered_ufc_red) <- c("ReachCms", "AvgSigStrLanded", "WeightClass")

# appending the two data sets
filtered_ufc = rbind(filtered_ufc_blue, filtered_ufc_red)

# exclude outlier(one observation with 0 cm reach)

```

```

filtered_ufc = filtered_ufc[filtered_ufc$ReachCms > 0,]
filtered_ufc <- filtered_ufc[filtered_ufc$AvgSigStrLanded > 0, ]
head(filtered_ufc)

```

	ReachCms	AvgSigStrLanded	WeightClass
1	172.72	2.72	Flyweight
2	165.10	3.71	Women's Flyweight
3	205.74	3.16	Light Heavyweight
4	172.72	3.70	Women's Flyweight
5	190.50	3.47	Middleweight
6	187.96	3.17	Welterweight

```

filtered_ufc$WeightClass = factor(filtered_ufc$WeightClass)

model = lm(AvgSigStrLanded ~ ReachCms * WeightClass, data = filtered_ufc)

summary(model)

```

Call:

```
lm(formula = AvgSigStrLanded ~ ReachCms * WeightClass, data = filtered_ufc)
```

Residuals:

Min	1Q	Median	3Q	Max
-35.135	-16.171	-6.027	12.207	130.647

Coefficients:

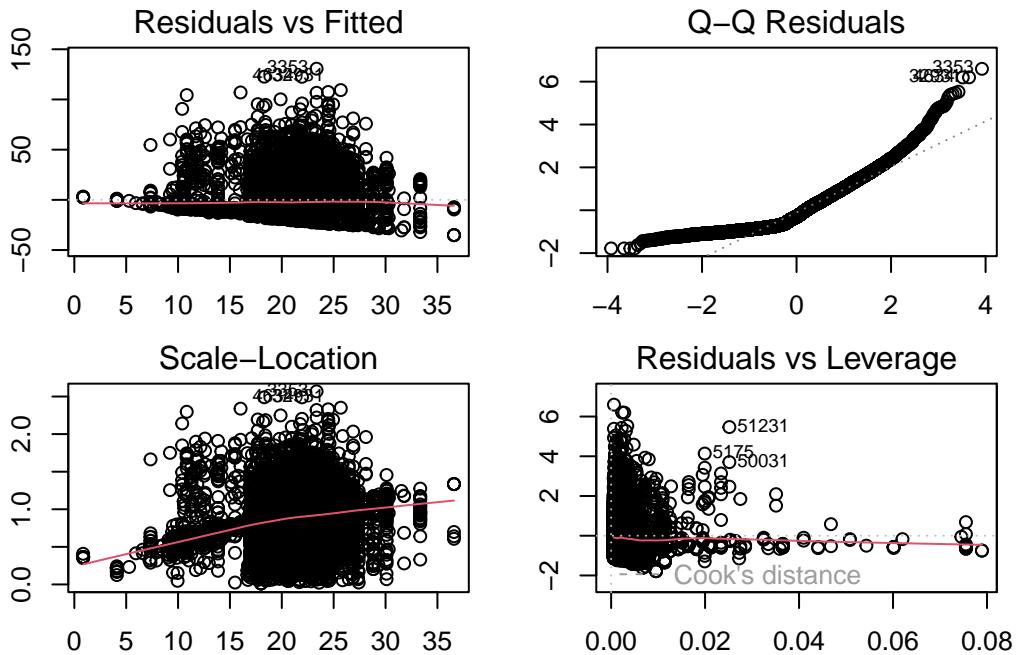
	Estimate	Std. Error	t value
(Intercept)	74.92696	16.55798	4.525
ReachCms	-0.30958	0.09470	-3.269
WeightClassCatch Weight	-16.41034	40.14358	-0.409
WeightClassFeatherweight	51.70713	23.99668	2.155
WeightClassFlyweight	163.15170	28.74514	5.676
WeightClassHeavyweight	-43.24918	24.78102	-1.745
WeightClassLight Heavyweight	-47.03594	25.83485	-1.821
WeightClassLightweight	16.44751	22.14358	0.743
WeightClassMiddleweight	-22.73777	23.74580	-0.958
WeightClassWelterweight	-12.91923	22.10497	-0.584
WeightClassWomen's Bantamweight	13.10397	37.75600	0.347
WeightClassWomen's Featherweight	-40.31606	99.95745	-0.403
WeightClassWomen's Flyweight	-92.73927	32.33606	-2.868

WeightClassWomen's Strawweight	-129.30083	29.29945	-4.413
ReachCms:WeightClassCatch Weight	0.05083	0.22313	0.228
ReachCms:WeightClassFeatherweight	-0.27387	0.13530	-2.024
ReachCms:WeightClassFlyweight	-0.96984	0.16728	-5.798
ReachCms:WeightClassHeavyweight	0.24070	0.13305	1.809
ReachCms:WeightClassLight Heavyweight	0.27234	0.13926	1.956
ReachCms:WeightClassLightweight	-0.06627	0.12448	-0.532
ReachCms:WeightClassMiddleweight	0.13700	0.13010	1.053
ReachCms:WeightClassWelterweight	0.10111	0.12284	0.823
ReachCms:WeightClassWomen's Bantamweight	-0.07875	0.22029	-0.357
ReachCms:WeightClassWomen's Featherweight	0.19122	0.57212	0.334
ReachCms:WeightClassWomen's Flyweight	0.48310	0.18998	2.543
ReachCms:WeightClassWomen's Strawweight	0.78714	0.17649	4.460
	Pr(> t)		
(Intercept)	6.10e-06 ***		
ReachCms	0.00108 **		
WeightClassCatch Weight	0.68270		
WeightClassFeatherweight	0.03120 *		
WeightClassFlyweight	1.41e-08 ***		
WeightClassHeavyweight	0.08097 .		
WeightClassLight Heavyweight	0.06869 .		
WeightClassLightweight	0.45764		
WeightClassMiddleweight	0.33831		
WeightClassWelterweight	0.55893		
WeightClassWomen's Bantamweight	0.72855		
WeightClassWomen's Featherweight	0.68671		
WeightClassWomen's Flyweight	0.00414 **		
WeightClassWomen's Strawweight	1.03e-05 ***		
ReachCms:WeightClassCatch Weight	0.81981		
ReachCms:WeightClassFeatherweight	0.04298 *		
ReachCms:WeightClassFlyweight	6.91e-09 ***		
ReachCms:WeightClassHeavyweight	0.07046 .		
ReachCms:WeightClassLight Heavyweight	0.05053 .		
ReachCms:WeightClassLightweight	0.59451		
ReachCms:WeightClassMiddleweight	0.29234		
ReachCms:WeightClassWelterweight	0.41046		
ReachCms:WeightClassWomen's Bantamweight	0.72073		
ReachCms:WeightClassWomen's Featherweight	0.73821		
ReachCms:WeightClassWomen's Flyweight	0.01101 *		
ReachCms:WeightClassWomen's Strawweight	8.27e-06 ***		

Signif. codes:	0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1		

```
Residual standard error: 19.81 on 11431 degrees of freedom
Multiple R-squared:  0.03295,   Adjusted R-squared:  0.03084
F-statistic: 15.58 on 25 and 11431 DF,  p-value: < 2.2e-16
```

```
par(mfrow = c(2, 2), mar = c(2, 2, 2, 2))
plot(model)
```



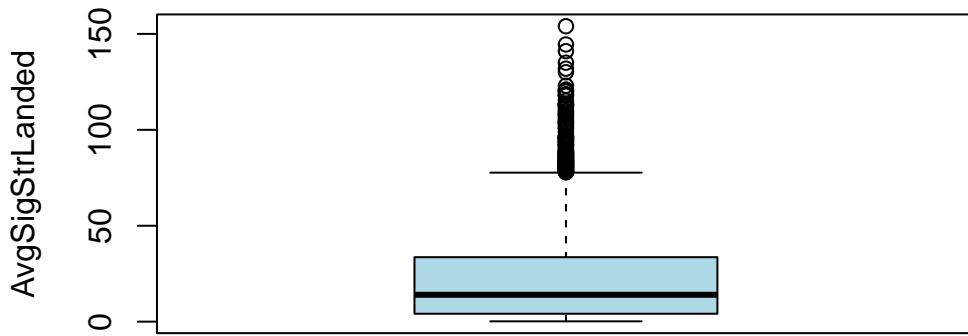
Linearity assumption being violated

Equal variance assumption being violated

Checking the distributions of the outcome and predictor variables

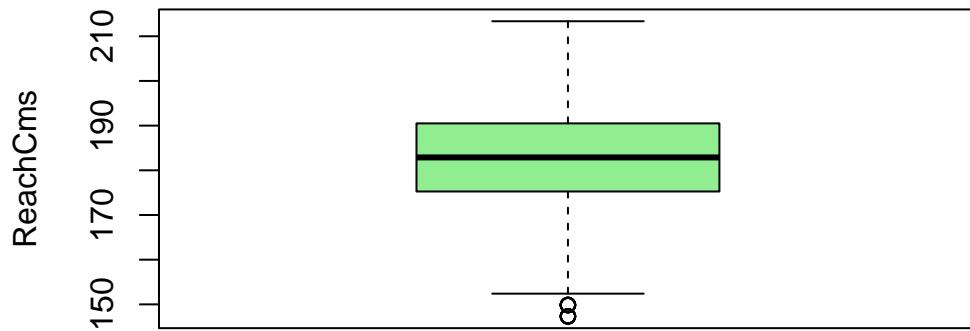
```
# outcome variable
boxplot(filtered_ufc$AvgSigStrLanded,
        main = "Boxplot of AvgSigStrLanded",
        ylab = "AvgSigStrLanded",
        col = "lightblue")
```

Boxplot of AvgSigStrLanded



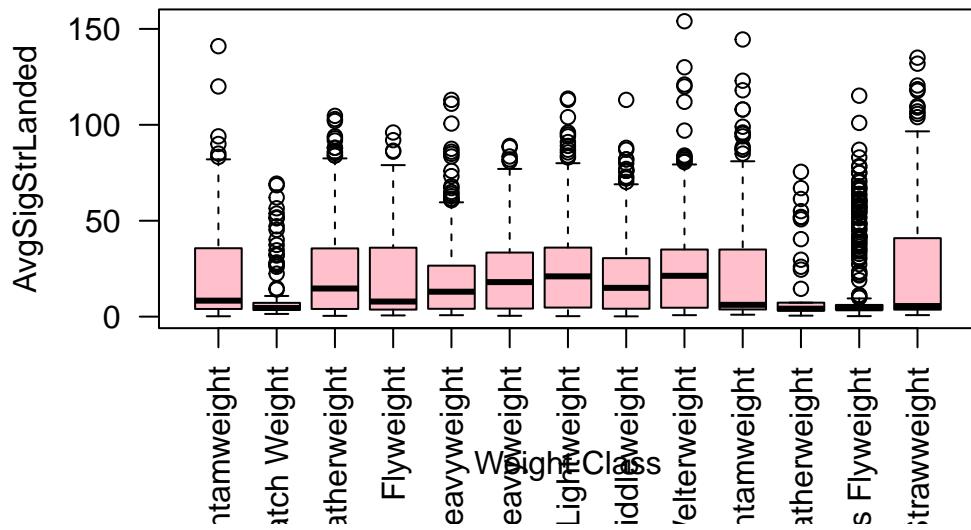
```
boxplot(filtered_ufc$ReachCms,
        main = "Boxplot of ReachCms",
        ylab = "ReachCms",
        col = "lightgreen")
```

Boxplot of ReachCms



```
boxplot(AvgSigStrLanded ~ WeightClass,
        data = filtered_ufc,
        main = "Boxplot of AvgSigStrLanded by Weight Class",
        xlab = "Weight Class",
        ylab = "AvgSigStrLanded",
        col = "pink",
        las = 2) # Rotate x-axis labels for readability
```

Boxplot of AvgSigStrLanded by Weight Class

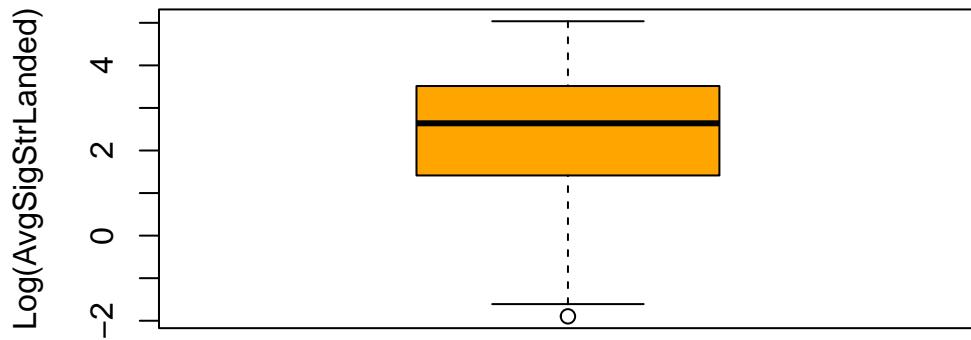


Log transforming all the variables and checking the distribution

```
# Log-transform the variables
filtered_ufc$LogAvgSigStrLanded <- log(filtered_ufc$AvgSigStrLanded)
filtered_ufc$LogReachCms <- log(filtered_ufc$ReachCms)

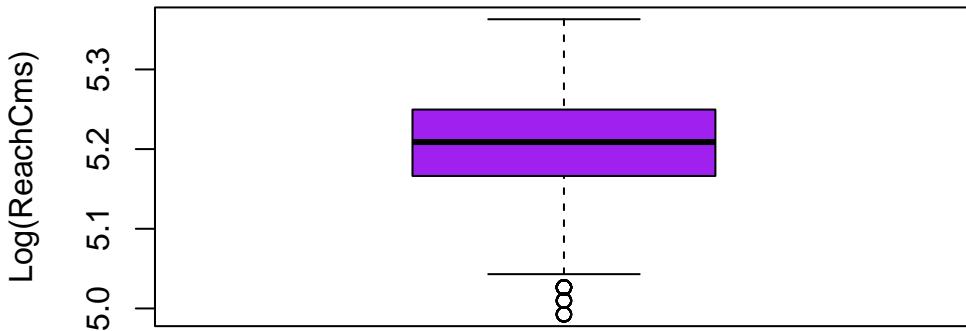
# Boxplot for log-transformed AvgSigStrLanded
boxplot(filtered_ufc$LogAvgSigStrLanded,
         main = "Boxplot of Log(AvgSigStrLanded)",
         ylab = "Log(AvgSigStrLanded)",
         col = "orange")
```

Boxplot of Log(AvgSigStrLanded)



```
# Boxplot for log-transformed ReachCms
boxplot(filtered_ufc$LogReachCms,
         main = "Boxplot of Log(ReachCms)",
         ylab = "Log(ReachCms)",
         col = "purple")
```

Boxplot of Log(ReachCms)



```
model_log <- lm(LogAvgSigStrLanded ~ LogReachCms * WeightClass, data = filtered_ufc)
summary(model_log)
```

Call:

```
lm(formula = LogAvgSigStrLanded ~ LogReachCms * WeightClass,
  data = filtered_ufc)
```

Residuals:

Min	1Q	Median	3Q	Max
-4.2808	-1.0156	0.1242	0.9675	3.0182

Coefficients:

	Estimate	Std. Error	t value
(Intercept)	17.481380	4.818352	3.628
LogReachCms	-2.918097	0.933286	-3.127
WeightClassCatch Weight	0.139533	11.682777	0.012
WeightClassFeatherweight	15.564256	6.992545	2.226
WeightClassFlyweight	56.353430	8.348930	6.750
WeightClassHeavyweight	-9.181965	7.294519	-1.259
WeightClassLight Heavyweight	-10.248035	7.651211	-1.339
WeightClassLightweight	2.977911	6.476798	0.460

WeightClassMiddleweight	-2.414576	6.975805	-0.346
WeightClassWelterweight	-0.622770	6.480375	-0.096
WeightClassWomen's Bantamweight	-0.175266	10.935239	-0.016
WeightClassWomen's Featherweight	10.480862	29.301762	0.358
WeightClassWomen's Flyweight	-23.436916	9.329845	-2.512
WeightClassWomen's Strawweight	-37.875335	8.431193	-4.492
LogReachCms:WeightClassCatch Weight	-0.114204	2.250887	-0.051
LogReachCms:WeightClassFeatherweight	-2.969015	1.350596	-2.198
LogReachCms:WeightClassFlyweight	-10.998515	1.622531	-6.779
LogReachCms:WeightClassHeavyweight	1.801642	1.394803	1.292
LogReachCms:WeightClassLight Heavyweight	2.024423	1.464198	1.383
LogReachCms:WeightClassLightweight	-0.503961	1.250192	-0.403
LogReachCms:WeightClassMiddleweight	0.514160	1.339423	0.384
LogReachCms:WeightClassWelterweight	0.205765	1.247897	0.165
LogReachCms:WeightClassWomen's Bantamweight	0.008631	2.126171	0.004
LogReachCms:WeightClassWomen's Featherweight	-2.149513	5.676000	-0.379
LogReachCms:WeightClassWomen's Flyweight	4.422802	1.816459	2.435
LogReachCms:WeightClassWomen's Strawweight	7.384097	1.649178	4.477
Pr(> t)			
(Intercept)	0.000287 ***		
LogReachCms	0.001772 **		
WeightClassCatch Weight	0.990471		
WeightClassFeatherweight	0.026045 *		
WeightClassFlyweight	1.55e-11 ***		
WeightClassHeavyweight	0.208147		
WeightClassLight Heavyweight	0.180467		
WeightClassLightweight	0.645682		
WeightClassMiddleweight	0.729247		
WeightClassWelterweight	0.923442		
WeightClassWomen's Bantamweight	0.987213		
WeightClassWomen's Featherweight	0.720584		
WeightClassWomen's Flyweight	0.012017 *		
WeightClassWomen's Strawweight	7.12e-06 ***		
LogReachCms:WeightClassCatch Weight	0.959536		
LogReachCms:WeightClassFeatherweight	0.027948 *		
LogReachCms:WeightClassFlyweight	1.27e-11 ***		
LogReachCms:WeightClassHeavyweight	0.196493		
LogReachCms:WeightClassLight Heavyweight	0.166810		
LogReachCms:WeightClassLightweight	0.686877		
LogReachCms:WeightClassMiddleweight	0.701084		
LogReachCms:WeightClassWelterweight	0.869034		
LogReachCms:WeightClassWomen's Bantamweight	0.996761		
LogReachCms:WeightClassWomen's Featherweight	0.704916		

```

LogReachCms:WeightClassWomen's Flyweight      0.014913 *
LogReachCms:WeightClassWomen's Strawweight    7.63e-06 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

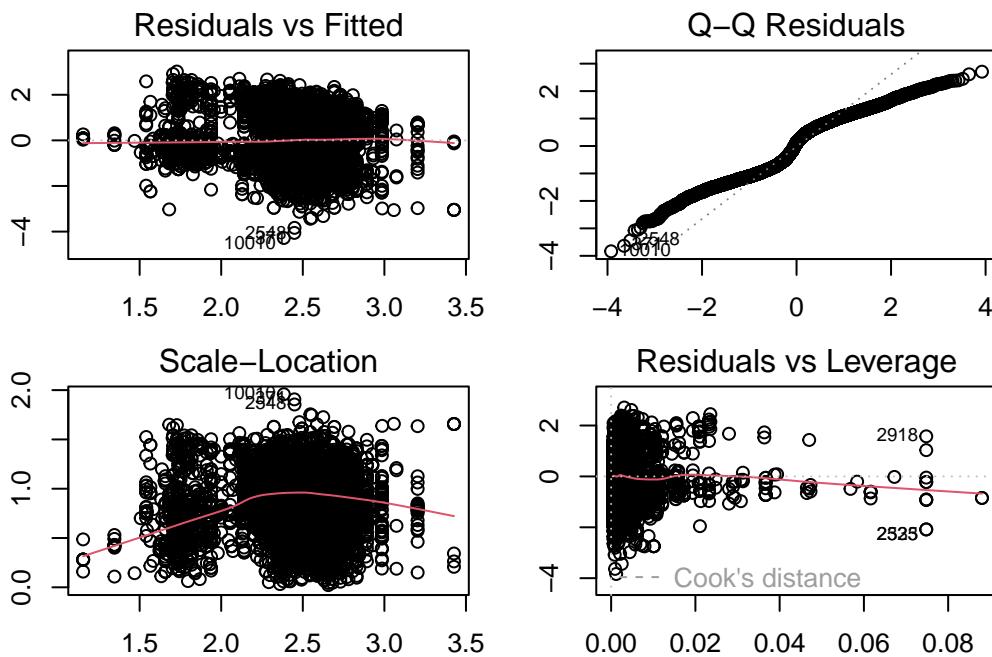
Residual standard error: 1.117 on 11431 degrees of freedom
Multiple R-squared:  0.04748,   Adjusted R-squared:  0.0454
F-statistic: 22.79 on 25 and 11431 DF,  p-value: < 2.2e-16

```

```

par(mfrow = c(2, 2), mar = c(2, 2, 2, 2))
plot(model_log)

```



Log Transformed Model Evaluation

```

# Load necessary libraries
library(car)          # For VIF

```

Loading required package: carData

```

library(ggplot2)      # For residual plots

# 1. Check Variance Inflation Factor (VIF) for collinearity
vif_values <- vif(model_log)

```

there are higher-order terms (interactions) in this model
consider setting type = 'predictor'; see ?vif

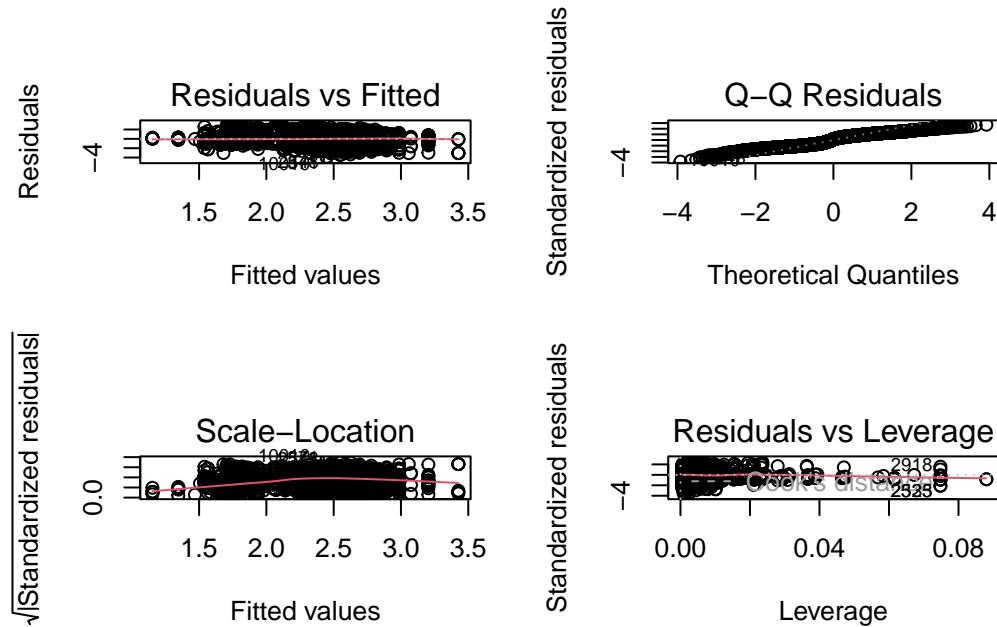
```
print("Variance Inflation Factor (VIF):")
```

[1] "Variance Inflation Factor (VIF):"

```
print(vif_values)
```

	GVIF	Df	GVIF^(1/(2*Df))
LogReachCms	2.982482e+01	1	5.46121
WeightClass	2.614566e+52	12	152.77712
LogReachCms:WeightClass	2.656355e+52	12	152.87809

```
# 2. Residuals vs Fitted Plot for Linearity
par(mfrow = c(2, 2))  # Set plotting layout
plot(model_log)
```



```

# 3. Normal Q-Q Plot for Normality of Residuals
qqnorm(residuals(model_log))
qqline(residuals(model_log))

# 4. Scale-Location Plot for Homoscedasticity
plot(model_log, which = 3)

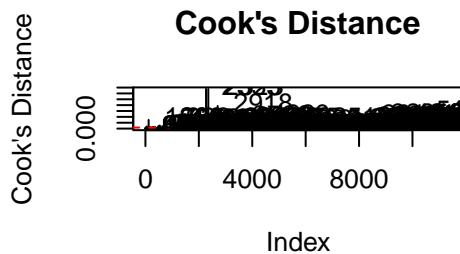
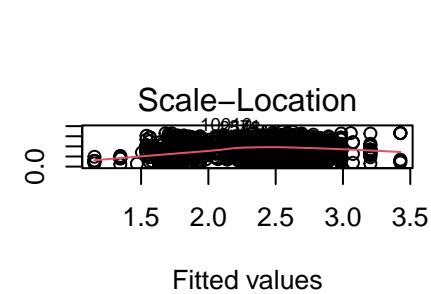
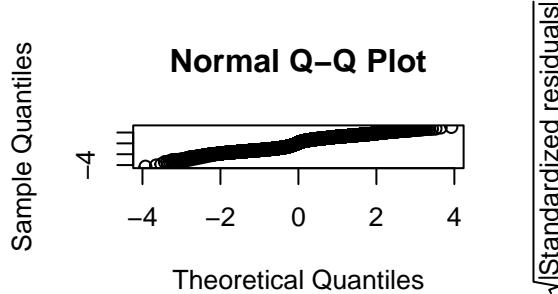
# 5. Check for influential points using Cook's Distance
cooksrd <- cooks.distance(model_log)
plot(cooksrd, type = "h", main = "Cook's Distance", ylab = "Cook's Distance")

# Highlight observations with Cook's Distance > threshold
threshold <- 4 / nrow(filtered_ufc)
influential <- which(cooksrd > threshold)
abline(h = threshold, col = "red", lty = 2)
text(x = influential, y = cooksrd[influential], labels = names(cooksrd[influential]), pos = 4)

# 6. R-squared value
r_squared <- summary(model_log)$r.squared
cat("R-squared:", r_squared, "\n")

```

R-squared: 0.04748068



```

# Load necessary library
library(knitr)

# Create a summary of the model
model_summary <- summary(model_log)

# Extract coefficients and format into a data frame
coef_table <- as.data.frame(model_summary$coefficients)
colnames(coef_table) <- c("Estimate", "Std. Error", "t value", "Pr(>|t|)")

# Create a kable table
kable(coef_table, caption = "Regression Coefficients for model_log", format = "markdown")

```

Table 1: Regression Coefficients for model_log

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	17.4813798	4.8183523	3.6280825	0.0002868
LogReachCms	-	0.9332859	-	0.0017723
WeightClassCatch Weight	2.9180973		3.1266917	
WeightClassFeatherweight	0.1395327	11.6827773	0.0119435	0.9904709
WeightClassFlyweight	15.5642563	6.9925451	2.2258357	0.0260446
WeightClassHeavyweight	56.3534303	8.3489298	6.7497789	0.0000000
WeightClassLight Heavyweight	-	7.2945189	-	0.2081469
WeightClassLightweight	9.1819649		1.2587485	
WeightClassMiddleweight	-	7.6512106	-	0.1804670
WeightClassWelterweight	10.2480347		1.3394004	
WeightClassWomen's Bantamweight	2.9779108	6.4767976	0.4597814	0.6456819
WeightClassWomen's Featherweight	-	6.9758046	-	0.7292470
WeightClassWomen's Flyweight	2.4145756		0.3461358	
WeightClassWomen's Strawweight	-	6.4803748	-	0.9234422
LogReachCms:WeightClassCatch Weight	0.6227695		0.0961009	
LogReachCms:WeightClassFeatherweight	-	10.9352392	-	0.9872126
LogReachCms:WeightClassFlyweight	0.1752657		0.0160276	
LogReachCms:WeightClassHeavyweight	10.4808625	29.3017618	0.3576871	0.7205841
LogReachCms:WeightClassLight Heavyweight	-	9.3298450	-	0.0120173
LogReachCms:WeightClassLightweight	23.4369156		2.5120370	
LogReachCms:WeightClassMiddleweight	-	8.4311932	-	0.0000071
LogReachCms:WeightClassWelterweight	37.8753349		4.4922864	

			Std.	
	Estimate	Error	t value	Pr(> t)
LogReachCms:WeightClassFeatherweight	- 2.9690154	1.3505961 2.1983000	-	0.0279477
LogReachCms:WeightClassFlyweight	- 10.9985149	1.6225315 6.7786141	-	0.0000000
LogReachCms:WeightClassHeavyweight	1.8016418	1.3948027	1.2916822	0.1964933
LogReachCms:WeightClassLight	2.0244233	1.4641982	1.3826156	0.1668098
Heavyweight				
LogReachCms:WeightClassLightweight	- 0.5039612	1.2501917 0.4031071	-	0.6868770
LogReachCms:WeightClassMiddleweight	0.5141605	1.3394232	0.3838671	0.7010841
LogReachCms:WeightClassWelterweight	0.2057650	1.2478971	0.1648894	0.8690340
LogReachCms:WeightClassWomen's	0.0086307	2.1261708	0.0040593	0.9967613
Bantamweight				
LogReachCms:WeightClassWomen's	- 2.1495128	5.6760001 0.3787020	-	0.7049162
Featherweight				
LogReachCms:WeightClassWomen's	4.4228025	1.8164585	2.4348491	0.0149132
Flyweight				
LogReachCms:WeightClassWomen's	7.3840969	1.6491781	4.4774406	0.0000076
Strawweight				