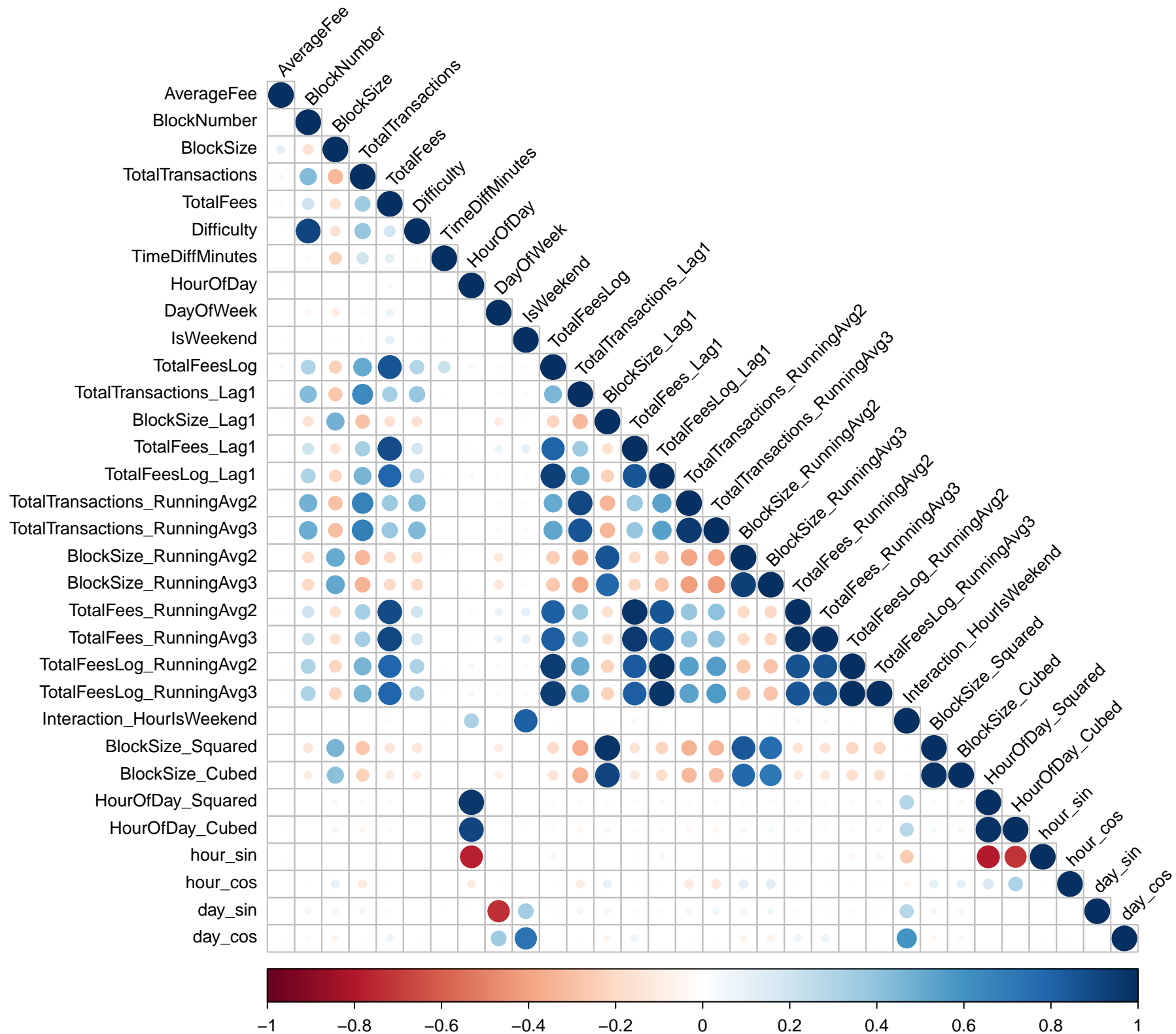
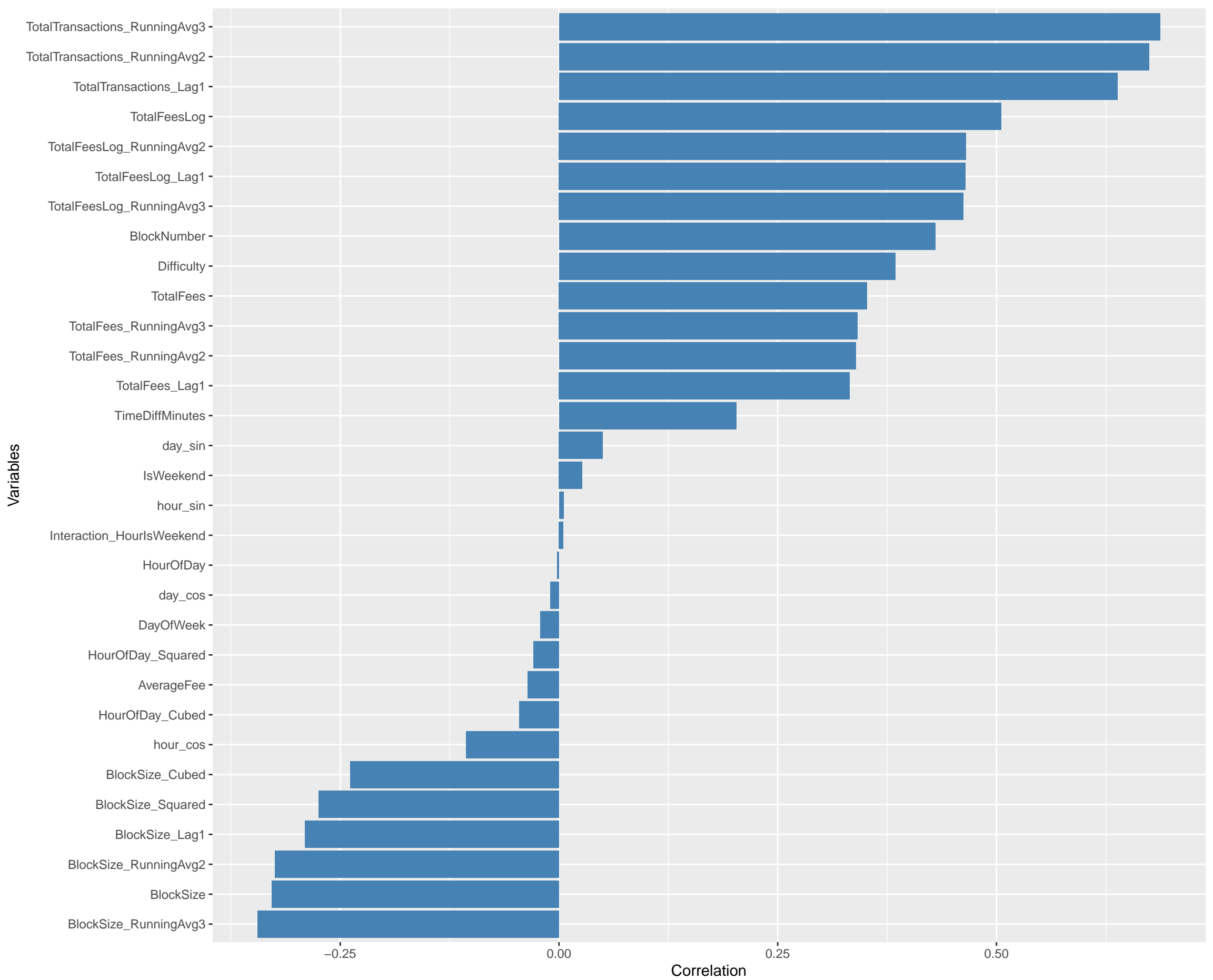


# Correlation Matrix



# Correlation with TotalTransactions



# PCA Summary

Importance of components:

	PC1	PC2	PC3	PC4	PC5	PC6	PC7
Standard deviation	3.1006	2.0770	1.9287	1.58350	1.54619	1.31495	1.10778
Proportion of Variance	0.3004	0.1348	0.1162	0.07836	0.07471	0.05403	0.03835
Cumulative Proportion	0.3004	0.4352	0.5515	0.62983	0.70454	0.75858	0.79693
	PC8	PC9	PC10	PC11	PC12	PC13	PC14
Standard deviation	1.09083	1.00428	0.98486	0.77337	0.64763	0.62841	0.61310
Proportion of Variance	0.03718	0.03152	0.03031	0.01869	0.01311	0.01234	0.01175
Cumulative Proportion	0.83411	0.86563	0.89594	0.91463	0.92774	0.94008	0.95183
	PC15	PC16	PC17	PC18	PC19	PC20	PC21
Standard deviation	0.57053	0.53316	0.42962	0.38958	0.37723	0.32703	0.2830
Proportion of Variance	0.01017	0.00888	0.00577	0.00474	0.00445	0.00334	0.0025
Cumulative Proportion	0.96200	0.97088	0.97665	0.98139	0.98584	0.98918	0.9917
	PC22	PC23	PC24	PC25	PC26	PC27	PC28
Standard deviation	0.26903	0.24149	0.23050	0.18193	0.13932	0.10590	0.09701
Proportion of Variance	0.00226	0.00182	0.00166	0.00103	0.00061	0.00035	0.00029
Cumulative Proportion	0.99395	0.99577	0.99743	0.99846	0.99907	0.99942	0.99971
	PC29	PC30	PC31	PC32			
Standard deviation	0.07505	0.04353	0.03961	0.00528			
Proportion of Variance	0.00018	0.00006	0.00005	0.00000			
Cumulative Proportion	0.99989	0.99995	1.00000	1.00000			

Interaction_HoursWeekend	0.04407381	5.321903e-02	0.2727608812
BlockSize_Squared	-0.13918928	-1.405141e-01	0.0027914945
BlockSize_Cubed	-0.17607052	-1.453480e-01	0.0112943242
HourOfDay_Squared	-0.05143854	1.103795e-02	0.1711424779
HourOfDay_Cubed	-0.05953734	1.645324e-02	0.2456247004
hour_sin	-0.001581996	-0.00111502	0.8281960436
hour_cos	0.01885049	1.943896e-03	-0.0919894052
day_sin	-0.04790933	-3.930519e-02	-0.1236659409
day_cos	0.09542965	-6.339566e-02	-0.2370342682
	PC16	PC17	PC18
AverageFee	-0.0015819963	-0.0041485089	0.0152971435
BlockNumber	-0.0222710918	-0.0688365833	-0.0067264555
BlockSize	0.0045380719	-0.0089915111	0.0467938925
TotalTransactions	0.0386666818	0.0160563721	0.0663335521
TotalFees	-0.0035743696	-0.0126209907	-0.7279710042
Difficulty	0.0248871143	0.0635406845	0.0252302416
TimeDiffMinutes	-0.0128053718	0.0037672952	0.1646279483
HourOfDay	0.1608223754	-0.0016694956	-0.0106411075
DayOfWeek	-0.0194103332	-0.7067751631	0.0433477169
IsWeekend	-0.1648231593	0.0369369378	-0.0469669251
TotalFeesLog	-0.0061580209	-0.0480019858	-0.3323539092
TotalTransactions_Lag1	0.0164880487	0.0103113205	0.2115531728
BlockSize_Lag1	-0.0118254904	0.0097462997	0.0715016030
TotalFees_Lag1	0.0004723452	0.0627711119	0.2932266960
TotalFeesLog_Lag1	0.0019722011	-0.0123877817	0.1756676247
TotalTransactions_RunningAvg2	-0.0059240799	0.0016951690	-0.0921750190
TotalTransactions_RunningAvg3	-0.0123308842	-0.0061975707	-0.1896398527
BlockSize_RunningAvg2	0.0439127067	-0.0172373428	-0.0413749790
BlockSize_RunningAvg3	0.0487504407	-0.0176915962	-0.0592364577
TotalFees_RunningAvg2	-0.0011327562	0.0506312425	0.2409974072
TotalFees_RunningAvg3	-0.0016115031	0.0379773485	0.1700293691
TotalFeesLog_RunningAvg2	-0.0018414210	-0.0189339649	0.1007514013
TotalFeesLog_RunningAvg3	-0.0030020799	-0.0243448463	0.0494238944
Interaction_HoursWeekend	-0.5504822520	-0.0143792325	0.0295781600
BlockSize_Squared	-0.0193747722	0.0043421385	0.0145395923
BlockSize_Cubed	-0.0243414484	0.0042640734	-0.0099617194
HourOfDay_Squared	0.1332858385	0.0002819950	-0.0108333525
HourOfDay_Cubed	0.1580144309	-0.0002350828	-0.0136746495
hour_sin	0.2906989164	-0.0136757632	-0.0238318129
hour_cos	-0.0955377110	-0.0028090443	0.0024834814
day_sin	0.2819661046	-0.6408711930	0.0524997492
day_cos	0.6472633412	0.2577483712	0.0009299884
	PC19	PC20	PC21
AverageFee	0.0037509089	0.001658726	0.0003979827
BlockNumber	0.0159157687	0.026351970	0.4074831742
BlockSize	0.0136387114	-0.008235286	0.0125154731
TotalTransactions	-0.0255793028	0.001516298	-0.0536006950
TotalFees	-0.2590059424	0.060465558	-0.0328483003
Difficulty	-0.0544046772	-0.035814863	-0.4123310118
TimeDiffMinutes	0.0751237759	-0.014892504	0.0190891656
HourOfDay	0.0002328251	0.064086810	0.0014382082

## PCA Loadings

# Decision Suggestions

## ### Decision Suggestions based on Correlation Analysis

### 1. \*\*Features with High Correlation\*\*:

Consider using the following features in your model as they show a significant correlation with the target variable:

- TotalTransactions\_RunningAvg3
- TotalTransactions\_RunningAvg2
  - TotalTransactions\_Lag1
  - TotalFeesLog
- TotalFeesLog\_RunningAvg2
  - TotalFeesLog\_Lag1
- TotalFeesLog\_RunningAvg3
  - BlockNumber
  - Difficulty
  - TotalFees
- TotalFees\_RunningAvg3
- TotalFees\_RunningAvg2
  - TotalFees\_Lag1
- BlockSize\_RunningAvg2
  - BlockSize
- BlockSize\_RunningAvg3

### 2. \*\*Features with Moderate Correlation\*\*:

Consider using the following features with caution, as they show moderate correlation with the target variable:

- TimeDiffMinutes
- hour\_cos
- BlockSize\_Cubed
- BlockSize\_Squared
- BlockSize\_Lag1

## ### Decision Suggestions based on PCA Analysis

### 3. \*\*Principal Components\*\*:

Consider the principal components that explain the majority of the variance. Use these components to reduce dimensionality if needed.