

Lab 7

2025-06-10

R Markdown

Diving

```
##           Judge p_value   judge_dod
## 1         ALT Walter   0.000 0.390721836
## 2         MENA Jesus   0.000 0.304643597
## 3         ZAITSEV Oleg  0.000 0.284658009
## 4     BARNETT Madeleine 0.000 0.288843095
## 5         BURK Hans-Peter 0.001 0.463470757
## 6     GEISSBUHLER Michael 0.001 0.679408950
## 7  RUIZ-PEDREGUERA Rolando 0.002 0.278875380
## 8         McFARLAND Steve 0.002 0.190227310
## 9     BOOTHROYD Sydney  0.002 0.282549729
## 10        XU Yiming    0.002 0.264107671
## 11        CRUZ Julia   0.003 0.304360902
## 12        HUBER Peter   0.013 0.308680290
## 13        BOYS Beverley 0.015 0.212877575
## 14        SEAMAN Kathy  0.068 0.156098383
## 15        CALDERON Felix 0.071 0.300501605
## 16        BOUSSARD Michel 0.173 0.109413708
## 17        WANG Facheng  0.483 -0.001056406
## 18        GEAR Dennis   NA      NaN
## 19        JOHNSON Bente  NA      NaN
## 20        LINDBERG Mathz  NA      NaN
## 21        HOOD Robin    NA      NaN
## 22        STEWART Anthea  NA      NaN
## 23        HASSAN Mostafa  NA      NaN
## 24        CERMAKOVA Maria  NA      NaN
## 25        KELEMEN Ildiko  NA      NaN
```

Alt, Mena , Zaitsev, and Barnett all have a pvalue of 0.000, suggesting strong bias. others also have very low pvalues, but those are the worst

Beisbol

```
##
## Call:
## lm(formula = EVENT_WOBA_19 ~ factor(ORDER_CT) + WOBA_FINAL_BAT_19 +
##     WOBA_FINAL_PIT_19 + factor(HAND_MATCH) + factor(BAT_HOME_IND),
##     data = mlb_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.0089 -0.3351 -0.2762  0.3995  1.8396
##
## Coefficients:
```

```

##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)      -0.299474   0.010136 -29.545 < 2e-16 ***
## factor(ORDER_CT)2    0.013320   0.002481   5.370 7.89e-08 ***
## factor(ORDER_CT)3    0.018678   0.002894   6.454 1.09e-10 ***
## WOBA_FINAL_BAT_19    0.969365   0.017123  56.611 < 2e-16 ***
## WOBA_FINAL_PIT_19    0.962272   0.026636  36.127 < 2e-16 ***
## factor(HAND_MATCH)0.5 -0.008645   0.010414  -0.830  0.406
## factor(HAND_MATCH)1  -0.016307   0.002206  -7.392 1.45e-13 ***
## factor(BAT_HOME_IND)1  0.009987   0.002183   4.575 4.77e-06 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5053 on 214378 degrees of freedom
## Multiple R-squared:  0.0222, Adjusted R-squared:  0.02217
## F-statistic: 695.4 on 7 and 214378 DF, p-value: < 2.2e-16

##
## Call:
## lm(formula = EVENT_WOBA_19 ~ factor(ORDER_CT) + WOBA_FINAL_BAT_19 +
##     WOBA_FINAL_PIT_19 + factor(HAND_MATCH) + factor(BAT_HOME_IND) +
##     BATTER_SEQ_NUM, data = mlb_data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1.0133 -0.3348 -0.2761  0.3995  1.8391
##
## Coefficients:
##               Estimate Std. Error t value Pr(>|t|)
## (Intercept)      -0.3165717   0.0113419 -27.912 < 2e-16 ***
## factor(ORDER_CT)2    -0.0015282   0.0050680  -0.302 0.763005
## factor(ORDER_CT)3    -0.0097894   0.0089539  -1.093 0.274260
## WOBA_FINAL_BAT_19    0.9990859   0.0192730  51.839 < 2e-16 ***
## WOBA_FINAL_PIT_19    0.9621733   0.0266352  36.124 < 2e-16 ***
## factor(HAND_MATCH)0.5 -0.0089847   0.0104141  -0.863 0.388283
## factor(HAND_MATCH)1  -0.0168379   0.0022116  -7.614 2.68e-14 ***
## factor(BAT_HOME_IND)1  0.0099935   0.0021831   4.578 4.70e-06 ***
## BATTER_SEQ_NUM       0.0016492   0.0004909   3.360 0.000781 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5053 on 214377 degrees of freedom
## Multiple R-squared:  0.02225, Adjusted R-squared:  0.02222
## F-statistic: 609.9 on 8 and 214377 DF, p-value: < 2.2e-16

```

in model one, all p values besides hand_match 0.5 are significant. however, in model 2, neither order_ct variables are significant at all any more. batter_seq_num is significant, implying that that is what is actually significant, with the count variables acting as a proxy for that in model1.