

# Title of Your Report

Names of your Group Members

Due Date

**Title of your Report**

**Name(s) of Author(s)**

**Date**

## **Abstract**

Here is where you give a brief (one paragraph overview of your entire paper). This should include some background/introduction, some methodology, results and conclusions.

## **Introduction**

Here is where you should give insight into the setting and introduce the goal of the analysis. Here you can introduce ideas and basic concepts regarding the study setting and the potential model. Again, this is the introduction, so you should be explaining the importance of the work that is ahead and hopefully build some suspense for the reader. You can also highlight what will be included in the subsequent sections.

## **Data**

Introduce the data, explain why it was selected. Make sure to comment on important features and highlight any potential drawbacks to the data.

## **Data Cleaning**

```
## -- Attaching packages ----- tidyverse 1.3.0 --
## v ggplot2 3.3.2      v purrr   0.3.4
## v tibble  3.0.4      v dplyr   1.0.2
## v tidyr   1.1.2      v stringr 1.4.0
## v readr   1.4.0      v forcats 0.5.0

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

## Split Data

## Model

Introduce the selected model here. It is expected that you will use some mathematical notation here. If you do please ensure that all notation is explained. You may also want to discuss any special (hypothetical) cases of your model here, as well as any caveats.

## Base Model

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

## Variable Selection and Regularization

```
##
## Call:  glm(formula = hasSameEducation ~ age_first_child + as.factor(total_children) +
##       as.factor(feelings_life) + as.factor(place_birth_canada) +
##       as.factor(province) + as.factor(education) + as.factor(hh_type) +
##       as.factor(partner_birth_province) + as.factor(average_hours_worked) +
##       as.factor(selfRatedHealth) + as.factor(selfRatedMentalHealth) +
##       as.factor(income_family) + as.factor(income_respondent),
##       family = binomial, data = train_df)
##
## Coefficients:
##                                     (Intercept)
##                                     -17.770999
##                                     age_first_child
##                                     -0.009654
##               as.factor(total_children)2
##               -0.175792
##               as.factor(total_children)3
##               0.027056
##               as.factor(total_children)4
##               -0.185489
##               as.factor(total_children)5
##               0.444429
##               as.factor(total_children)6
##               -0.157155
##               as.factor(total_children)7
##               0.152825
##               as.factor(feelings_life)3
##               -20.739932
##               as.factor(feelings_life)4
##               15.735174
##               as.factor(feelings_life)5
##               -0.897031
##               as.factor(feelings_life)6
##               -0.403344
##               as.factor(feelings_life)7
##               -0.170160
##               as.factor(feelings_life)8
##               -0.597849
```

```

##                                as.factor(feelings_life)9
##                                -0.790773
##                                as.factor(feelings_life)10
##                                -0.670254
##                                as.factor(place_birth_canada)Born outside Canada
##                                0.627877
##                                as.factor(place_birth_canada)Don't know
##                                1.773604
##                                as.factor(province)British Columbia
##                                0.252202
##                                as.factor(province)Manitoba
##                                0.068344
##                                as.factor(province)New Brunswick
##                                0.903245
##                                as.factor(province)Newfoundland and Labrador
##                                0.866185
##                                as.factor(province)Nova Scotia
##                                0.837005
##                                as.factor(province)Ontario
##                                0.963726
##                                as.factor(province)Prince Edward Island
##                                -0.508870
##                                as.factor(province)Quebec
##                                -0.230198
##                                as.factor(province)Saskatchewan
##                                0.848437
## as.factor(education)College, CEGEP or other non-university certificate or di...
##                                -31.302282
## as.factor(education)High school diploma or a high school equivalency certificate
##                                -30.227783
##                                as.factor(education)Less than high school diploma or its equivalent
##                                0.242033
##                                as.factor(education)Trade certificate or diploma
##                                -1.289828
## as.factor(education)University certificate or diploma below the bachelor's level
##                                -0.758986
## as.factor(education)University certificate, diploma or degree above the bach...
##                                -21.535879
##                                as.factor(hh_type)High-rise apartment (5 or more stories)
##                                -2.514771
##                                as.factor(hh_type)Low-rise apartment (less than 5 stories)
##                                -1.538622
##                                as.factor(hh_type)Other
##                                -2.055632
##                                as.factor(hh_type)Single detached house
##                                -1.710735
##                                as.factor(partner_birth_province)British Columbia
##                                0.114618
##                                as.factor(partner_birth_province)Manitoba
##                                -0.022238
##                                as.factor(partner_birth_province)New Brunswick
##                                -0.287278
##                                as.factor(partner_birth_province)Newfoundland and Labrador
##                                -0.082147

```

```

##             as.factor(partner_birth_province)Nova Scotia
##                                                     -0.418124
##             as.factor(partner_birth_province)Ontario
##                                                     -0.554558
##             as.factor(partner_birth_province)Outside Canada
##                                                     -0.219124
##             as.factor(partner_birth_province)Prince Edward Island
##                                                     0.729108
##             as.factor(partner_birth_province)Quebec
##                                                     0.693048
##             as.factor(partner_birth_province)Saskatchewan
##                                                     -0.604531
##             as.factor(partner_birth_province)Yukon / Northwest Territories / Nunavut
##                                                     0.291787
##             as.factor(average_hours_worked)0.1 to 29.9 hours
##                                                     20.403319
##             as.factor(average_hours_worked)30.0 to 40.0 hours
##                                                     20.470465
##             as.factor(average_hours_worked)40.1 to 50.0 hours
##                                                     20.315810
##             as.factor(average_hours_worked)50.1 hours and more
##                                                     20.171525
##             as.factor(average_hours_worked)Don't know
##                                                     20.522417
##             as.factor(selfRatedHealth)Excellent
##                                                     -1.182859
##             as.factor(selfRatedHealth)Fair
##                                                     -1.168308
##             as.factor(selfRatedHealth)Good
##                                                     -1.188375
##             as.factor(selfRatedHealth)Poor
##                                                     -0.691678
##             as.factor(selfRatedHealth)Very good
##                                                     -1.320975
##             as.factor(selfRatedMentalHealth)Fair
##                                                     -0.049350
##             as.factor(selfRatedMentalHealth)Good
##                                                     -0.628972
##             as.factor(selfRatedMentalHealth)Poor
##                                                     0.537989
##             as.factor(selfRatedMentalHealth)Very good
##                                                     -0.151457
##             as.factor(income_family)$125,000 and more
##                                                     0.418493
##             as.factor(income_family)$25,000 to $49,999
##                                                     -0.147494
##             as.factor(income_family)$50,000 to $74,999
##                                                     0.012795
##             as.factor(income_family)$75,000 to $99,999
##                                                     0.492312
##             as.factor(income_family)Less than $25,000
##                                                     -0.057759
##             as.factor(income_respondent)$125,000 and more
##                                                     0.444826

```

[illegible]

[illegible]

[illegible]

```

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

##
## Call:  glm(formula = hasSameEducation ~ as.factor(feelings_life) + as.factor(place_birth_canada) +
##       as.factor(education) + as.factor(self Rated mental health),
##       family = binomial, data = train_df)
##
## Coefficients:
##                                     (Intercept)
##                                     -0.551053
##                                     as.factor(feelings_life)3
##                                     -19.581579
##                                     as.factor(feelings_life)4
##                                     16.512902
##                                     as.factor(feelings_life)5
##                                     0.008673
##                                     as.factor(feelings_life)6
##                                     0.492938
##                                     as.factor(feelings_life)7
##                                     0.711252
##                                     as.factor(feelings_life)8
##                                     0.299564
##                                     as.factor(feelings_life)9
##                                     0.159265
##                                     as.factor(feelings_life)10
##                                     0.247421
##                                     as.factor(place_birth_canada)Born outside Canada
##                                     0.395409
##                                     as.factor(place_birth_canada)Don't know
##                                     1.532862
## as.factor(education)College, CEGEP or other non-university certificate or di...
##                                     -30.945224
## as.factor(education)High school diploma or a high school equivalency certificate
##                                     -31.372697
##                                     as.factor(education)Less than high school diploma or its equivalent
##                                     -0.049749
##                                     as.factor(education)Trade certificate or diploma
##                                     -1.355330
## as.factor(education)University certificate or diploma below the bachelor's level
##                                     -0.842047
## as.factor(education)University certificate, diploma or degree above the bach...
##                                     -21.305119
##                                     as.factor(self Rated mental health)Fair
##                                     -0.295141
##                                     as.factor(self Rated mental health)Good
##                                     -0.593105
##                                     as.factor(self Rated mental health)Poor
##                                     0.290096
##                                     as.factor(self Rated mental health)Very good

```



```

##                                                                 -0.213357
##
## Degrees of Freedom: 2549 Total (i.e. Null);  2529 Residual
## Null Deviance:          2130
## Residual Deviance: 1313  AIC: 1355
##
## Call:  glm(formula = hasSameEducation ~ age_first_child + as.factor(total_children) +
##          as.factor(feelings_life) + as.factor(place_birth_canada) +
##          as.factor(province) + as.factor(education) + as.factor(hh_type) +
##          as.factor(partner_birth_province) + as.factor(average_hours_worked) +
##          as.factor(selfRatedHealth) + as.factor(selfRatedMentalHealth) +
##          as.factor(income_family) + as.factor(income_respondent),
##          family = binomial, data = train_df)
##
## Coefficients:
##                                     (Intercept)
##                                     -17.770999
##                                     age_first_child
##                                     -0.009654
##          as.factor(total_children)2
##                                     -0.175792
##          as.factor(total_children)3
##                                     0.027056
##          as.factor(total_children)4
##                                     -0.185489
##          as.factor(total_children)5
##                                     0.444429
##          as.factor(total_children)6
##                                     -0.157155
##          as.factor(total_children)7
##                                     0.152825
##          as.factor(feelings_life)3
##                                     -20.739932
##          as.factor(feelings_life)4
##                                     15.735174
##          as.factor(feelings_life)5
##                                     -0.897031
##          as.factor(feelings_life)6
##                                     -0.403344
##          as.factor(feelings_life)7
##                                     -0.170160
##          as.factor(feelings_life)8
##                                     -0.597849
##          as.factor(feelings_life)9
##                                     -0.790773
##          as.factor(feelings_life)10
##                                     -0.670254
##          as.factor(place_birth_canada)Born outside Canada
##                                     0.627877
##          as.factor(place_birth_canada)Don't know
##                                     1.773604
##          as.factor(province)British Columbia
##                                     0.252202

```

```

##                                     as.factor(province)Manitoba
##                                     0.068344
##                                     as.factor(province)New Brunswick
##                                     0.903245
##                                     as.factor(province)Newfoundland and Labrador
##                                     0.866185
##                                     as.factor(province)Nova Scotia
##                                     0.837005
##                                     as.factor(province)Ontario
##                                     0.963726
##                                     as.factor(province)Prince Edward Island
##                                     -0.508870
##                                     as.factor(province)Quebec
##                                     -0.230198
##                                     as.factor(province)Saskatchewan
##                                     0.848437
## as.factor(education)College, CEGEP or other non-university certificate or di...
##                                     -31.302282
## as.factor(education)High school diploma or a high school equivalency certificate
##                                     -30.227783
## as.factor(education)Less than high school diploma or its equivalent
##                                     0.242033
## as.factor(education)Trade certificate or diploma
##                                     -1.289828
## as.factor(education)University certificate or diploma below the bachelor's level
##                                     -0.758986
## as.factor(education)University certificate, diploma or degree above the bach...
##                                     -21.535879
## as.factor(hh_type)High-rise apartment (5 or more stories)
##                                     -2.514771
## as.factor(hh_type)Low-rise apartment (less than 5 stories)
##                                     -1.538622
## as.factor(hh_type)Other
##                                     -2.055632
## as.factor(hh_type)Single detached house
##                                     -1.710735
## as.factor(partner_birth_province)British Columbia
##                                     0.114618
## as.factor(partner_birth_province)Manitoba
##                                     -0.022238
## as.factor(partner_birth_province)New Brunswick
##                                     -0.287278
## as.factor(partner_birth_province)Newfoundland and Labrador
##                                     -0.082147
## as.factor(partner_birth_province)Nova Scotia
##                                     -0.418124
## as.factor(partner_birth_province)Ontario
##                                     -0.554558
## as.factor(partner_birth_province)Outside Canada
##                                     -0.219124
## as.factor(partner_birth_province)Prince Edward Island
##                                     0.729108
## as.factor(partner_birth_province)Quebec
##                                     0.693048

```

```

##               as.factor(partner_birth_province)Saskatchewan
##                                                     -0.604531
## as.factor(partner_birth_province)Yukon / Northwest Territories / Nunavut
##                                                     0.291787
##               as.factor(average_hours_worked)0.1 to 29.9 hours
##                                                     20.403319
##               as.factor(average_hours_worked)30.0 to 40.0 hours
##                                                     20.470465
##               as.factor(average_hours_worked)40.1 to 50.0 hours
##                                                     20.315810
##               as.factor(average_hours_worked)50.1 hours and more
##                                                     20.171525
##               as.factor(average_hours_worked)Don't know
##                                                     20.522417
##               as.factor(selfRatedHealth)Excellent
##                                                     -1.182859
##               as.factor(selfRatedHealth)Fair
##                                                     -1.168308
##               as.factor(selfRatedHealth)Good
##                                                     -1.188375
##               as.factor(selfRatedHealth)Poor
##                                                     -0.691678
##               as.factor(selfRatedHealth)Very good
##                                                     -1.320975
##               as.factor(selfRatedMentalHealth)Fair
##                                                     -0.049350
##               as.factor(selfRatedMentalHealth)Good
##                                                     -0.628972
##               as.factor(selfRatedMentalHealth)Poor
##                                                     0.537989
##               as.factor(selfRatedMentalHealth)Very good
##                                                     -0.151457
##               as.factor(income_family)$125,000 and more
##                                                     0.418493
##               as.factor(income_family)$25,000 to $49,999
##                                                     -0.147494
##               as.factor(income_family)$50,000 to $74,999
##                                                     0.012795
##               as.factor(income_family)$75,000 to $99,999
##                                                     0.492312
##               as.factor(income_family)Less than $25,000
##                                                     -0.057759
##               as.factor(income_respondent)$125,000 and more
##                                                     0.444826
##               as.factor(income_respondent)$25,000 to $49,999
##                                                     0.211286
##               as.factor(income_respondent)$50,000 to $74,999
##                                                     0.191087
##               as.factor(income_respondent)$75,000 to $99,999
##                                                     0.122290
##               as.factor(income_respondent)Less than $25,000
##                                                     0.268872
##
## Degrees of Freedom: 2549 Total (i.e. Null);  2478 Residual

```



[illegible]

```

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
##
## Call:  glm(formula = hasSameEducation ~ as.factor(education), family = binomial,
##       data = train_df)
##
## Coefficients:
##                                     (Intercept)
##                                     -0.3263
## as.factor(education)College, CEGEP or other non-university certificate or di...
##                                     -20.2398
## as.factor(education)High school diploma or a high school equivalency certificate
##                                     -20.2398
##           as.factor(education)Less than high school diploma or its equivalent
##                                     -0.1592
##           as.factor(education)Trade certificate or diploma
##                                     -1.4983
## as.factor(education)University certificate or diploma below the bachelor's level
##                                     -0.8322
## as.factor(education)University certificate, diploma or degree above the bach...
##                                     -20.2398
##
## Degrees of Freedom: 2549 Total (i.e. Null);  2543 Residual
## Null Deviance:      2130
## Residual Deviance: 1346  AIC: 1360

```

#### Forward stepwise AIC/BIC Model

```

## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred

```

## Backward stepwise AIC Model

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

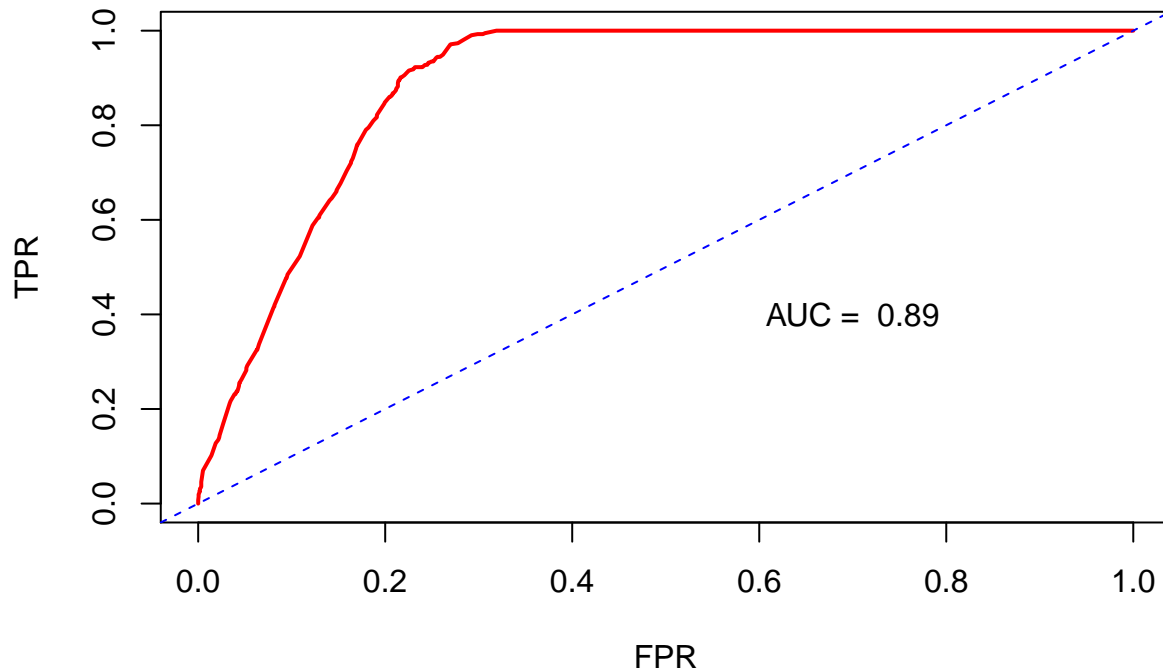
## Backward stepwise BIC Model

### LRT

```
## Loading required package: foreign
## Loading required package: survival
## Loading required package: MASS
##
## Attaching package: 'MASS'
## The following object is masked from 'package:dplyr':
##
##      select
## Loading required package: nnet
##
## Attaching package: 'epiDisplay'
## The following object is masked from 'package:ggplot2':
##
##      alpha
## Likelihood ratio test for MLE method
## Chi-squared 51 d.f. = 60.55973 , P value = 0.168971
## Likelihood ratio test for MLE method
## Chi-squared 14 d.f. = 33.08574 , P value = 0.002800105
```

### Validation

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
## Setting levels: control = FALSE, case = TRUE
## Setting direction: controls < cases
```



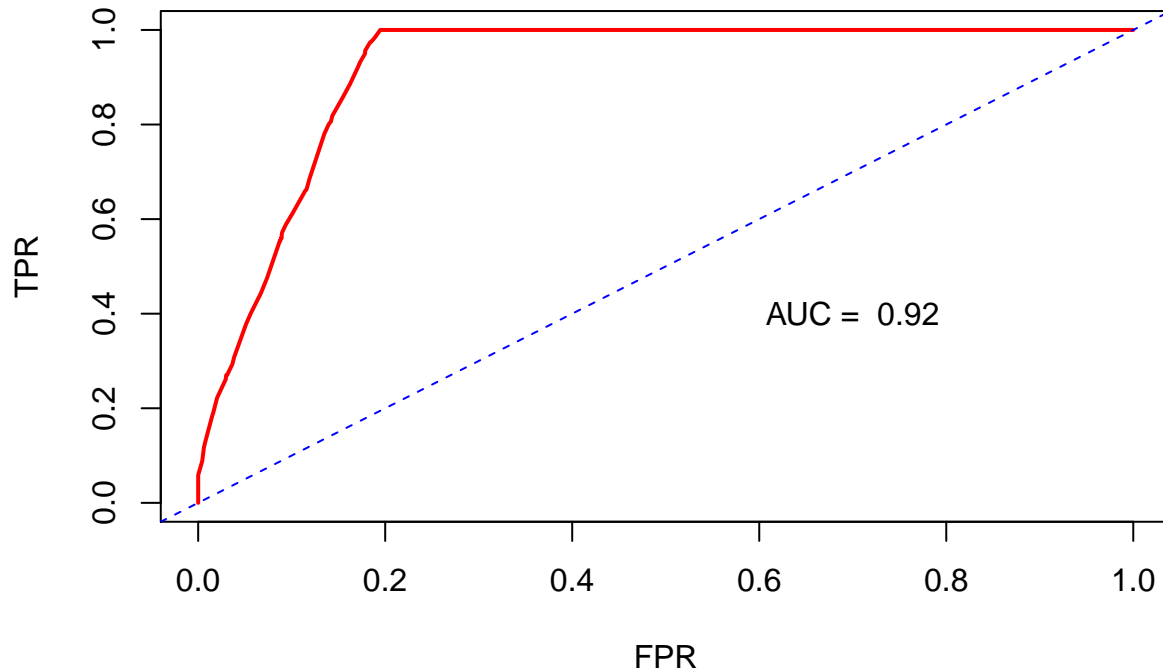
```
## [1] "AUC: 0.888534183572698"
```

### Influential Points

```
## Warning: glm.fit: fitted probabilities numerically 0 or 1 occurred
```

```
## Setting levels: control = FALSE, case = TRUE
```

```
## Setting direction: controls < cases
```



```
## [1] "AUC: 0.91884240808972"
```



```
##
## Call:
## glm(formula = hasSameEducation ~ as.factor(feelings_life) + as.factor(place_birth_canada) +
##      as.factor(education) + as.factor(self Rated mental health),
##      family = binomial, data = test_df_removed)
##
## Deviance Residuals:
##      Min       1Q   Median       3Q      Max
## -1.273    0.000    0.000    0.000    1.461
##
## Coefficients:
##
##                                     Estimate
## (Intercept)                        9.7743
## as.factor(feelings_life)4          -14.5907
## as.factor(feelings_life)5          -16.3560
## as.factor(feelings_life)6           2.5743
## as.factor(feelings_life)7           2.8484
## as.factor(feelings_life)8           2.8338
## as.factor(feelings_life)9           2.9043
## as.factor(feelings_life)10          2.8822
## as.factor(place_birth_canada)Born outside Canada 0.3331
## as.factor(place_birth_canada)Don't know 17.3950
## as.factor(education)College, CEGEP or other non-university certificate or di... -34.5778
## as.factor(education)High school diploma or a high school equivalency certificate -33.9275
## as.factor(education)Less than high school diploma or its equivalent -0.1959
## as.factor(education)Trade certificate or diploma -34.8317
## as.factor(education)University certificate or diploma below the bachelor's level -33.9536
## as.factor(education)University certificate, diploma or degree above the bach... -34.5480
## as.factor(self Rated mental health)Excellent -13.0364
## as.factor(self Rated mental health)Fair 4.1717
## as.factor(self Rated mental health)Good -13.0586
## as.factor(self Rated mental health)Poor -13.7192
## as.factor(self Rated mental health)Very good -12.7905
##
##                                     Std. Error
## (Intercept)                    31155.7152
## as.factor(feelings_life)4      18659.7365
## as.factor(feelings_life)5      11187.1143
## as.factor(feelings_life)6      10750.8321
## as.factor(feelings_life)7      10716.8498
## as.factor(feelings_life)8      10716.8498
## as.factor(feelings_life)9      10716.8498
## as.factor(feelings_life)10     10716.8498
## as.factor(place_birth_canada)Born outside Canada 0.1694
## as.factor(place_birth_canada)Don't know 1567.6617
## as.factor(education)College, CEGEP or other non-university certificate or di... 1166.2708
## as.factor(education)High school diploma or a high school equivalency certificate 1299.7609
## as.factor(education)Less than high school diploma or its equivalent 0.1938
## as.factor(education)Trade certificate or diploma 2009.5174
## as.factor(education)University certificate or diploma below the bachelor's level 2808.3085
## as.factor(education)University certificate, diploma or degree above the bach... 1483.6883
## as.factor(self Rated mental health)Excellent 29255.6521
## as.factor(self Rated mental health)Fair 29249.9686
## as.factor(self Rated mental health)Good 29255.6521
## as.factor(self Rated mental health)Poor 32233.9823
```

```

## as.factor(self Rated Mental Health)Very good 29255.6521
## z value
## (Intercept) 0.000
## as.factor(feelings_life)4 -0.001
## as.factor(feelings_life)5 -0.001
## as.factor(feelings_life)6 0.000
## as.factor(feelings_life)7 0.000
## as.factor(feelings_life)8 0.000
## as.factor(feelings_life)9 0.000
## as.factor(feelings_life)10 0.000
## as.factor(place_birth_canada)Born outside Canada 1.966
## as.factor(place_birth_canada)Don't know 0.011
## as.factor(education)College, CEGEP or other non-university certificate or di... -0.030
## as.factor(education)High school diploma or a high school equivalency certificate -0.026
## as.factor(education)Less than high school diploma or its equivalent -1.011
## as.factor(education)Trade certificate or diploma -0.017
## as.factor(education)University certificate or diploma below the bachelor's level -0.012
## as.factor(education)University certificate, diploma or degree above the bach... -0.023
## as.factor(self Rated Mental Health)Excellent 0.000
## as.factor(self Rated Mental Health)Fair 0.000
## as.factor(self Rated Mental Health)Good 0.000
## as.factor(self Rated Mental Health)Poor 0.000
## as.factor(self Rated Mental Health)Very good 0.000
## Pr(>|z|)
## (Intercept) 0.9997
## as.factor(feelings_life)4 0.9994
## as.factor(feelings_life)5 0.9988
## as.factor(feelings_life)6 0.9998
## as.factor(feelings_life)7 0.9998
## as.factor(feelings_life)8 0.9998
## as.factor(feelings_life)9 0.9998
## as.factor(feelings_life)10 0.9998
## as.factor(place_birth_canada)Born outside Canada 0.0493
## as.factor(place_birth_canada)Don't know 0.9911
## as.factor(education)College, CEGEP or other non-university certificate or di... 0.9763
## as.factor(education)High school diploma or a high school equivalency certificate 0.9792
## as.factor(education)Less than high school diploma or its equivalent 0.3121
## as.factor(education)Trade certificate or diploma 0.9862
## as.factor(education)University certificate or diploma below the bachelor's level 0.9904
## as.factor(education)University certificate, diploma or degree above the bach... 0.9814
## as.factor(self Rated Mental Health)Excellent 0.9996
## as.factor(self Rated Mental Health)Fair 0.9999
## as.factor(self Rated Mental Health)Good 0.9996
## as.factor(self Rated Mental Health)Poor 0.9997
## as.factor(self Rated Mental Health)Very good 0.9997
##
## (Intercept)
## as.factor(feelings_life)4
## as.factor(feelings_life)5
## as.factor(feelings_life)6
## as.factor(feelings_life)7
## as.factor(feelings_life)8
## as.factor(feelings_life)9
## as.factor(feelings_life)10

```

```

## as.factor(place_birth_canada)Born outside Canada *
## as.factor(place_birth_canada)Don't know
## as.factor(education)College, CEGEP or other non-university certificate or di...
## as.factor(education)High school diploma or a high school equivalency certificate
## as.factor(education)Less than high school diploma or its equivalent
## as.factor(education)Trade certificate or diploma
## as.factor(education)University certificate or diploma below the bachelor's level
## as.factor(education)University certificate, diploma or degree above the bach...
## as.factor(selfRatedMentalHealth)Excellent
## as.factor(selfRatedMentalHealth)Fair
## as.factor(selfRatedMentalHealth)Good
## as.factor(selfRatedMentalHealth)Poor
## as.factor(selfRatedMentalHealth)Very good
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## (Dispersion parameter for binomial family taken to be 1)
##
##    Null deviance: 1976.15  on 2446  degrees of freedom
## Residual deviance:  993.97  on 2426  degrees of freedom
## AIC: 1036
##
## Number of Fisher Scoring iterations: 20

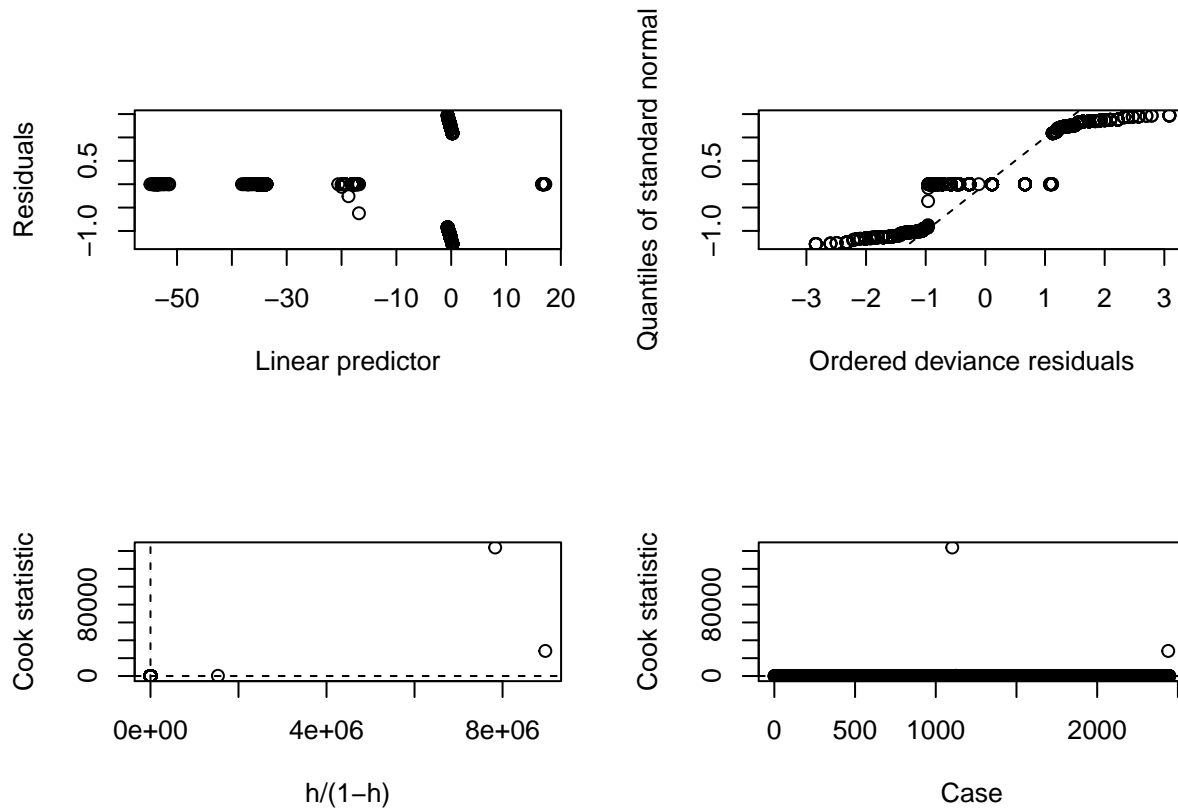
```

## Diagnostics

```

##
## Attaching package: 'boot'
##
## The following object is masked from 'package:survival':
##
##    aml

```



## Results

Here you will include all results. This includes descriptive statistics, graphs, figures, tables, and model results. Please ensure that everything is well formatted and in a report style. You must also provide an explanation of the results in this section. You can overflow to an Appendix if needed.

Please ensure that everything is well labelled. So if you have multiple histograms and plots, calling them Figure 1, 2, 3, etc. and referencing them as Figure 1, Figure 2, etc. in your report will be expected. The reader should not get lost in a sea of information. Make sure to have the results be clean, well formatted and digestible.

## Discussion

Here you will discuss conclusions drawn from the results and comment on how it relates to the original goal of the study (which was specified in the Introduction).

## Weaknesses

Here we discuss weaknesses of the study, data, analysis, etc. You can also discuss areas for improvement.

## Next Steps

Here you discuss subsequent work to be done after this report. This can include next steps in terms of statistical analysis (perhaps there is a more efficient algorithm available, or perhaps there is a caveat in the data that would allow for some new technique). Future steps should also be specified in terms of the study setting (eg. including a follow-up survey on something, or a subsequent study that would complement the conclusions of your report).

## References