

UMCH

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Import csv & Change data type

```
UMCHdata <- read_csv("/home/bj29/UMCH/data/UMCH.csv",
  col_types = cols(Birthdate = col_date(format = "%m/%d/%Y"),
    AgeYear = col_integer(),
    AgeMonth = col_integer(),
    AgeDay = col_integer()))

glimpse(UMCHdata)

## Rows: 33
## Columns: 17
## $ Filename      <chr> "failed_infant_1", "failed_infant_2",...
## $ Birthdate     <date> 2020-05-26, 2020-06-03, 2020-03-05, ...
## $ AgeGroup      <chr> "infant", "infant", "infant", "infant...
## $ Age           <chr> "0 Years, 4 Months, 27 Days", "0 Yea...
## $ AgeYear       <int> 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 2, 2, 1...
## $ AgeMonth      <int> 4, 4, 7, 11, 3, 9, 7, 8, 8, 5, 6, 2, ...
## $ AgeDay        <int> 27, 20, 18, 10, 22, 27, 8, 29, 15, 3,...
## $ PhysicalDevelopment <dbl> 4.0, 4.0, 13.0, 23.0, 6.0, 19.0, 19.0...
## $ LanguageDevelopment <dbl> 7.0, 5.0, 11.0, 32.0, 11.0, 21.0, 15....
## $ Adaptive_SelfHelp <dbl> 3, 3, 4, 6, 3, 8, 8, 8, 6, 7, 8, 8, 8...
## $ Adaptive_SocialEmotional <dbl> 3, 0, 5, 14, 5, 12, 12, 12, 12, 11, 1...
## $ AcademicAndCognitive <dbl> NA, NA, NA, NA, NA, NA, NA, NA, NA, N...
## $ AcademicAndCognitive_Maths <dbl> NA, NA, NA, NA, NA, NA, NA, NA, NA, N...
## $ AcademicAndCognitive_Literacy <dbl> NA, NA, NA, NA, NA, NA, NA, NA, NA, N...
## $ TotalScore     <dbl> 17.0, 12.0, 33.0, 75.0, 25.0, 60.0, 5...
## $ Status         <chr> "failed", "failed", "failed", "passed...
## $ Examiner       <chr> "Sam McGowen", "Sam McGowen", "Sam Mc...
```

Tidying data

```
UMCH <- UMCHdata %>% mutate(Status = tolower(Status))
```

Exploring data set

```
head(UMCH)
```

```
## # A tibble: 6 x 17
```

```
##   Filename Birthdate AgeGroup Age AgeYear AgeMonth AgeDay PhysicalDevelop~
##   <chr>      <date>    <chr>  <chr>  <int>  <int>  <int>      <dbl>
## 1 failed_~ 2020-05-26 infant  0 Ye~    0      4      27         4
## 2 failed_~ 2020-06-03 infant  0 Ye~    0      4      20         4
## 3 failed_~ 2020-03-05 infant  0 Ye~    0      7      18        13
## 4 passed_~ 2019-11-13 infant  0 Ye~    0     11      10        23
## 5 passed_~ 2020-07-01 infant  0 Ye~    0      3      22         6
## 6 failed_~ 2018-12-26 toddler 1 Ye~    1      9      27        19
## # ... with 9 more variables: LanguageDevelopment <dbl>,
## #   Adaptive_SelfHelp <dbl>, Adaptive_SocialEmotional <dbl>,
## #   AcademicAndCognitive <dbl>, AcademicAndCognitive_Maths <dbl>,
## #   AcademicAndCognitive_Literacy <dbl>, TotalScore <dbl>, Status <chr>,
## #   Examiner <chr>
```

`summary(UMCH)`

```
##   Filename      Birthdate      AgeGroup      Age
## Length:33      Min.       :2016-02-16 Length:33      Length:33
## Class :character 1st Qu.:2017-07-09 Class :character Class :character
## Mode  :character Median :2018-04-10 Mode  :character Mode  :character
##               Mean  :2018-04-21
##               3rd Qu.:2019-02-08
##               Max.   :2020-07-01
##
##   AgeYear      AgeMonth      AgeDay      PhysicalDevelopment
## Min.       :0.000 Min.       : 1.000 Min.       : 1.00 Min.       : 2.00
## 1st Qu.:1.000 1st Qu.: 4.000 1st Qu.:11.00 1st Qu.:10.00
## Median :2.000 Median : 7.000 Median :15.00 Median :19.00
## Mean   :1.939 Mean   : 6.242 Mean   :16.58 Mean   :17.09
## 3rd Qu.:3.000 3rd Qu.: 8.000 3rd Qu.:25.00 3rd Qu.:23.00
## Max.   :4.000 Max.   :11.000 Max.   :29.00 Max.   :28.00
##
## LanguageDevelopment Adaptive_SelfHelp Adaptive_SocialEmotional
## Min.       : 5.00 Min.       :3.000 Min.       : 0.000
## 1st Qu.:21.00 1st Qu.:4.000 1st Qu.: 5.000
## Median :35.50 Median :7.000 Median :12.000
## Mean   :32.09 Mean   :6.154 Mean   : 9.385
## 3rd Qu.:44.00 3rd Qu.:8.000 3rd Qu.:12.000
## Max.   :51.00 Max.   :8.000 Max.   :14.000
##               NA's :20 NA's :20
## AcademicAndCognitive AcademicAndCognitive_Maths AcademicAndCognitive_Literacy
## Min.       : 2.50 Min.       : 5.0 Min.       : 2.0
## 1st Qu.: 7.50 1st Qu.:15.0 1st Qu.: 9.0
## Median :13.25 Median :15.5 Median :10.0
## Mean   :13.22 Mean   :14.1 Mean   : 8.2
## 3rd Qu.:18.38 3rd Qu.:17.0 3rd Qu.:10.0
## Max.   :21.50 Max.   :18.0 Max.   :10.0
## NA's :13 NA's :28 NA's :28
##   TotalScore      Status      Examiner
## Min.       :12.0 Length:33 Length:33
## 1st Qu.:54.0 Class :character Class :character
## Median :74.0 Mode  :character Mode  :character
## Mean   :66.7
## 3rd Qu.:86.0
## Max.   :95.5
```

##