# Missing Data Introduction

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```
library(knitr)
opts_knit$set(root.dir ="../../")
opts_chunk$set(comment = NULL, message = FALSE, warning = FALSE, error = FALSE )
library(stargazer)
```

```
##
## Please cite as:
##
##  Hlavac, Marek (2015). stargazer: Well-Formatted Regression and Summary Statistics Tables.
##  R package version 5.2. http://CRAN.R-project.org/package=stargazer
```

```
library(texreg)
```

```
## Version:  1.35
## Date:     2015-04-25
## Author:   Philip Leifeld (University of Konstanz)
##
## Please cite the JSS article in your publications -- see citation("texreg").
```

```
n <- 20
set.seed(1234)
# IQ <- sort(sample(x = 78:134,
#                   size =  n,
#                   replace = TRUE))
IQ <- sort(rnorm(n, 100, 15))
math <- 10 + .63*IQ + rnorm(n, 0, 10)
dat <- data.frame(IQ = round(IQ), math = round(math))
stargazer(dat, type = "latex", summary = FALSE, header = FALSE,
          rownames = FALSE, title = "Data")
```

```
stargazer(dat, type = "latex", style = "apsr", header = FALSE,
          title = "Descriptive Statistics")
```

```
ctr <- function(x) scale(x, scale = FALSE)
mod1 <- lm(math ~ ctr(IQ), dat)
mod2 <- lm(math ~ I(IQ - 100), dat)
texreg(list(mod1, mod2), caption = "Regression Model", caption.above = TRUE, custom.model.names = c("ma
```

```
logistic <- function(x) exp(x)/(1 + exp(x))
set.seed(1234)
r.mcar <- 1 - rbinom(n, 1, 0.5 )
r.mar  <- 1 - rbinom(n, 1, logistic(IQ))
r.mnar <- 1 - rbinom(n, 1, logistic(math))
rmat <- cbind(r.mcar, r.mar, r.mnar)
stargazer(rmat, summary = FALSE)
```

Table 1: Data

| IQ | math |
|---|---|
| 65 | 52 |
| 82 | 57 |
| 85 | 59 |
| 86 | 69 |
| 87 | 58 |
| 87 | 51 |
| 88 | 71 |
| 91 | 57 |
| 92 | 68 |
| 92 | 58 |
| 92 | 79 |
| 93 | 64 |
| 98 | 65 |
| 101 | 69 |
| 104 | 59 |
| 106 | 65 |
| 108 | 56 |
| 114 | 69 |
| 116 | 80 |
| 136 | 91 |

Table 2: Descriptive Statistics

| Statistic | N | Mean | St. Dev. | Min | Max |
|---|---|---|---|---|---|
| IQ | 20 | 96.150 | 15.125 | 65 | 136 |
| math | 20 | 64.850 | 10.091 | 51 | 91 |

Table 3: Regression Model

| | math | math |
|---|---|---|
| (Intercept) | 64.85*** | 66.59*** |
| | (1.71) | (1.76) |
| ctr(IQ) | 0.45** | |
| | (0.12) | |
| I(IQ - 100) | | 0.45** |
| | | (0.12) |
| $R^2$ | 0.46 | 0.46 |
| Adj. $R^2$ | 0.43 | 0.43 |
| Num. obs. | 20 | 20 |
| RMSE | 7.64 | 7.64 |

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

% Table created by stargazer v.5.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
% Date and time: Tue, Sep 15, 2015 - 03:57:27 PM

Table 4:

| r.mcar | r.mar | r.mnar |
|---|---|---|
| 1 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 1 | 0 | 0 |
| 1 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| 1 | 0 | 0 |
| 0 | 0 | 0 |
| 1 | 0 | 0 |
| 0 | 0 | 0 |
| 1 | 0 | 0 |
| 1 | 0 | 0 |
| 1 | 0 | 0 |
| 1 | 0 | 0 |