Title of this Document: A Subtitle that may Flow onto Additional Space if Necessary

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1 Nuts and Bolts

1.1 DO NOT change the top part.

Leave the "output" section, font size, and that LaTeX stuff

```
output:
  pdf_document:
    keep_tex: true
    fig_caption: true
    latex_engine: pdflatex
    template: crmda-boilerplate.tex
    pandoc_args: [
      "--listings"
    ]
fontsize: 11pt
tables: true
preamble:
- \usepackage{xcolor}
- \usepackage{lipsum}
```

This is pretty standard and you shouldn't change it. Some changes might be needed if you *ADD* LaTeX preamble statements, but don't delete the onese we have.

1.2 DO please change Title, subtitle, your name

```
title: "My Fancy Rmd to PDF Document"
subtitle: "Made by yours truly!"
```

Include a title, a subtitle.

```
author:
- name: Paul Johnson
  affiliation: Center for Research Methods and Data Analysis
  description: Ze Director
  email: crmda@ku.edu
```

Someone's got to get credit for the wonderful report, right? If you're a graduate student, you can put that right in the description line. If you are not the CRMDA, then you might want to change the email line.

2 LaTeX Syntax is allowed

2.1 Equations

```
\[
\Sigma_{gt}=\Lambda_{gt}\Psi_{gt}\Lambda'_{gt}+\Theta_{gt}
\]
```

produces:

$$\Sigma_{gt} = \Lambda_{gt}\Psi_{gt}\Lambda'_{gt} + \Theta_{gt}$$

```
\[
f(y|N,p) = \frac{N!}{y!(N-y)!}\cdot p^y \cdot (1-p)^{N-y} = {{N}\choose{y}} \cdot p^y \cdot
    (1-p)^{N-y}
\]
```

produces:

$$f(y|N,p) = \frac{N!}{y!(N-y)!} \cdot p^y \cdot (1-p)^{N-y} = \binom{N}{y} \cdot p^y \cdot (1-p)^{N-y}$$

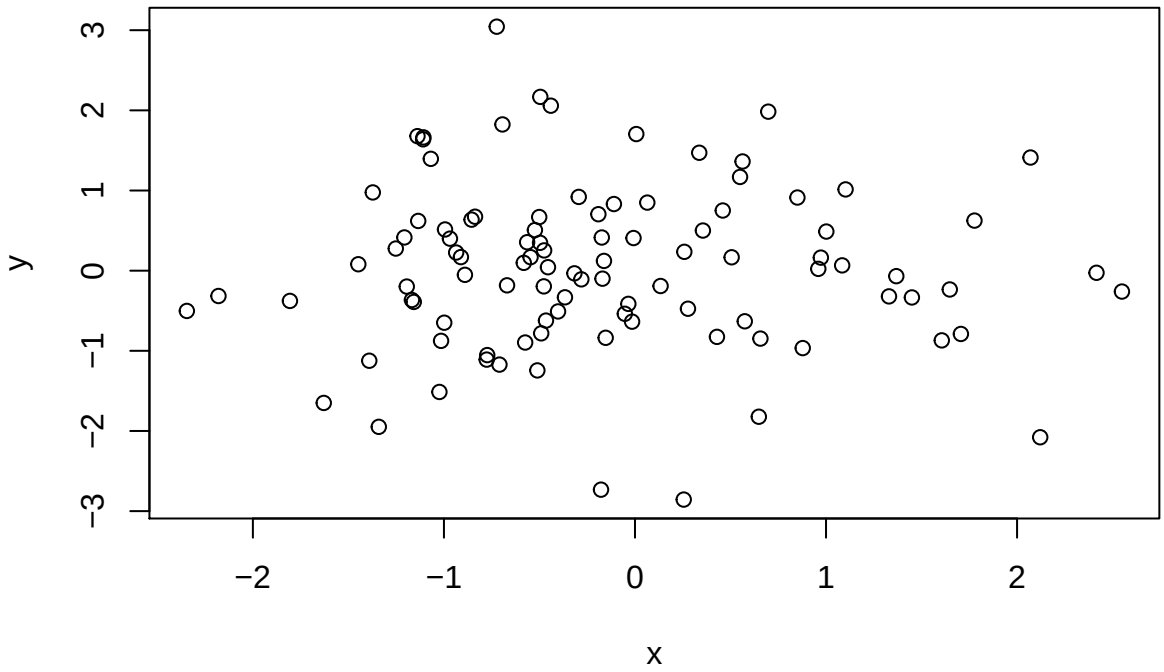
```
$\hat{y}=\beta_{0}+\beta_{2}x_{i}+\beta_{3}+x_{j}+\varepsilon_{ij}$
```

produces:

$\hat{y} = \beta_0 + \beta_2 x_i + \beta_3 + x_j + \varepsilon_{ij}$

2.2 R code

```
## This can be changed in the .tex preamble under lstset
set.seed(1234)
x <- rnorm(100, 0, 1)
y <- rnorm(100, 0, 1)
plot(x, y)
```




```
knitr::kable(head(data.frame(x, y)))
```

x	y
-1.2070657	0.4145235
0.2774292	-0.4747185
1.0844412	0.0659935
-2.3456977	-0.5024778
0.4291247	-0.8259986
0.5060559	0.1669893

```
z <- "A Character String"
```

```
library(xtable)
print(xtable(head(data.frame(x,y))), comment=FALSE)
```

	x	y
1	-1.21	0.41
2	0.28	-0.47
3	1.08	0.07
4	-2.35	-0.50
5	0.43	-0.83
6	0.51	0.17

```
library(rockchalk)
set.seed(2134234)
dat <- data.frame(x1 = rnorm(100), x2 = rnorm(100))
dat$y1 <- 30 + 5 * rnorm(100) + 3 * dat$x1 + 4 * dat$x2
dat$y2 <- rnorm(100) + 5 * dat$x2
m1 <- lm(y1 ~ x1, data = dat)
m2 <- lm(y1 ~ x2, data = dat)
```

Table 2: Still have showAIC argument, as in previous versions

	Whichever Estimate (S.E.)	Whatever Estimate (S.E.)
(Intercept)	30.245***	29.774***
	(0.618)	(0.522)
x1	1.546*	.
	(0.692)	
x2	.	3.413***
		(0.512)
N	100	100
RMSE	6.121	5.205
R^2	0.048	0.312
adj R^2	0.039	0.305
AIC	650.109	617.694

$*p \leq 0.05$** $p \leq 0.01$***$p \leq 0.001$

```
m3 <- lm(y1 ~ x1 + x2, data = dat)
gm1 <- glm(y1 ~ x1, family = Gamma, data = dat)
```

```
summary(gm1)
```

```

Call:
glm(formula = y1 ~ x1, family = Gamma, data = dat)

Deviance Residuals:
     Min        1Q    Median        3Q       Max
-0.51490  -0.15113   0.00612   0.12133   0.47188

Coefficients:
             Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.0331286  0.0006789  48.796   <2e-16 ***
x1          -0.0017309  0.0007766  -2.229   0.0281 *
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for Gamma family taken to be 0.04165642)

    Null deviance: 4.5089  on 99  degrees of freedom
Residual deviance: 4.3007  on 98  degrees of freedom
AIC: 652

Number of Fisher Scoring iterations: 4
```

```
outreg(list("Whichever" = m1, "Whatever" = m2),
       title = "Still have showAIC argument, as in previous versions",
       showAIC = TRUE, float = TRUE)
```

	Whichever Estimate (S.E.)	Whatever Estimate (S.E.)
(Intercept)	30.245***	29.774***
	(0.618)	(0.522)
x1	1.546*	.
	(0.692)	
x2	.	3.413***
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$*p \leq 0.05** p \leq 0.01***p \leq 0.001$

Here's the question: Is this report stationary better than what we had?

Lets get a team vote.

By the way, in case you wanted to see a giant copy of the logo, lets test the ability to insert a PDF graphic: