

Organizing the report

REPORTING WITH R MARKDOWN



Amy Peterson

Curriculum Manager at DataCamp

Lists and tables

- Region
 - East Asia and the Pacific
 - Europe and Central Asia
 - Latin America and the Caribbean
 - Middle East and North Africa
 - South Asia
 - Sub-Saharan Africa

Lists and tables

- Region
 - East Asia and the Pacific
 - Europe and Central Asia
 - Latin America and the Caribbean
 - Middle East and North Africa
 - South Asia
 - Sub-Saharan Africa
- Region
 - 1. East Asia and the Pacific
 - 2. Europe and Central Asia
 - 3. Latin America and the Caribbean
 - 4. Middle East and North Africa
 - 5. South Asia
 - 6. Sub-Saharan Africa

Region	Dollars in Millions
East Asia and the Pacific	16465
Europe and Central Asia	17659
Latin America and the Caribbean	22828
Middle East and North Africa	9755
South Asia	11459
Sub-Saharan Africa	16892

Bulleted lists

```
23 ### Investment Annual Summary
24 The `investment_annual_summary` dataset provides a summary of the
25 dollars in millions provided to each of the following regions for
26 each fiscal year, from 2012 to 2018:
27
28 - Region
29   - East Asia and the Pacific
30   - Europe and Central Asia
31   - Latin America and the Caribbean
32   - Middle East and North Africa
33   - South Asia
34   - Sub-Saharan Africa
```

Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

- Region
 - East Asia and the Pacific
 - Europe and Central Asia
 - Latin America and the Caribbean
 - Middle East and North Africa
 - South Asia
 - Sub-Saharan Africa

Numbered lists

```
23 ### Investment Annual Summary
24 The `investment_annual_summary` dataset provides a summary of the
25 dollars in millions provided to each of the following regions for
26 each fiscal year, from 2012 to 2018:
27
28 Region
29   1. East Asia and the Pacific
30   2. Europe and Central Asia
31   3. Latin America and the Caribbean
32   4. Middle East and North Africa
33   5. South Asia
34   6. Sub-Saharan Africa
```

Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

Region

1. East Asia and the Pacific
2. Europe and Central Asia
3. Latin America and the Caribbean
4. Middle East and North Africa
5. South Asia
6. Sub-Saharan Africa

Adding tables with kable()

```
44  ````{r tables}
45  kable(indonesia_investment_projects_2012_summary)
46  ````
```

```
kable(indonesia_investment_projects_2012_summary)
```

project_name	status	total_investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Modifying table column names

```
44  ```{r tables}
45  kable(indonesia_investment_projects_2012_summary,
46  | | | col.names = c("Project Name", "Status", "Total Investment"))
47  ```
```

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",
"Status", "Total Investment"))
```

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Table alignment

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",  
"Status", "Total Investment"))
```

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Modifying table alignment

```
44  ````{r tables}
45  kable(indonesia_investment_projects_2012_summary,
46  |   | col.names = c("Project Name", "Status", "Total Investment"),
47  |   | align = "ccc")
48  ````
```

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",
"Status", "Total Investment"), align = "ccc")
```

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Adding table caption

```
44  ````{r tables}
45  kable(indonesia_investment_projects_2012_summary,
46  |   col.names = c("Project Name", "Status", "Total Investment"),
47  |   align = "ccc",
48  |   caption = "Table 1.1 The total investment summary for each
49  |   project in Indonesia for the 2012 fiscal year.")
50  ````
```

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",
"Status", "Total Investment"), align = "ccc", caption = "Table 1.1 The total inv
estment summary for each project in Indonesia in the 2012 fiscal year.")
```

Table 1.1 The total investment summary for each project in Indonesia in the 2012 fiscal year.

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Code chunk options

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The data code chunk

```
11  ```{r data, include = FALSE}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15  library(knitr)
16
17 investment_annual_summary <- read_csv("https://assets.datacamp.com/
18   production/repositories/5756/datasets/
19   d0251f26117bbcf0ea96ac276555b9003f4f7372/
20   investment_annual_summary.csv")
21 investment_region_summary <- read_csv("https://assets.datacamp.com/
22   production/repositories/5756/datasets/
23   52f5414f6504e0503e86eb1043afa9b3d157fab2/
24   investment_region_summary.csv")
25 investment_services_projects <- read_csv("https://
26   assets.datacamp.com/production/repositories/5756/datasets/
27   bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
28   investment_services_projects.csv")
29 ...
30 ````
```

The data code chunk

```
11  ```{r data, include = FALSE}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15  library(knitr)
16
17 investment_annual_summary <- read_csv("https://assets.datacamp.com/
18   production/repositories/5756/datasets/
19   d0251f26117bbcf0ea96ac276555b9003f4f7372/
20   investment_annual_summary.csv")
21 investment_region_summary <- read_csv("https://assets.datacamp.com/
22   production/repositories/5756/datasets/
23   52f5414f6504e0503e86eb1043afa9b3d157fab2/
24   investment_region_summary.csv")
25 investment_services_projects <- read_csv("https://
26   assets.datacamp.com/production/repositories/5756/datasets/
27   bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
28   investment_services_projects.csv")
29 ...
30 ````
```

The include option

```
1 ---  
2 title: "Investment Report"  
3 date: ``r format(Sys.time(), '%d %B %Y')``  
4 output: html_document  
5 ---  
6  
7 ```{r setup, include = FALSE}  
8 knitr::opts_chunk$set(fig.align = 'center')  
9 ```  
10  
11 ```{r data, include = FALSE}  
12 library(readr)  
13 library(dplyr)  
14 library(ggplot2)  
15 library(knitr)  
16  
17 investment_annual_summary <- read_csv("https://  
assets.datacamp.com/production/repositories/5756/datasets/  
d0251f26117bbcf0ea96ac276555b9003f4f7372/  
investment_annual_summary.csv")  
18 investment_region_summary <- read_csv("https://  
assets.datacamp.com/production/repositories/5756/datasets/  
52f5414f6504e0503e86eb1043afa9b3d157fab2/  
investment_region_summary.csv")  
19 investment_services_projects <- read_csv("https://  
assets.datacamp.com/production/repositories/5756/datasets/  
bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/  
investment_services_projects.csv")  
20  
21  
22 ## Datasets  
23 ### Investment Annual Summary  
24
```

Investment Report

28 April 2020

Datasets

Investment Annual Summary

The echo option

```
34 ````{r investment-annual-summary, out.width = '85%', fig.cap = 'Figure  
1.1 The Investment Annual Summary for each region for 2012 to 2018.',  
echo = FALSE}  
35 ggplot(investment_annual_summary, aes(x = fiscal_year, y =  
dollars_in_millions, color = region)) +  
  geom_line() +  
  labs(  
    title = "Investment Annual Summary",  
    x = "Fiscal Year",  
    y = "Dollars in Millions"  
  )  
````
```

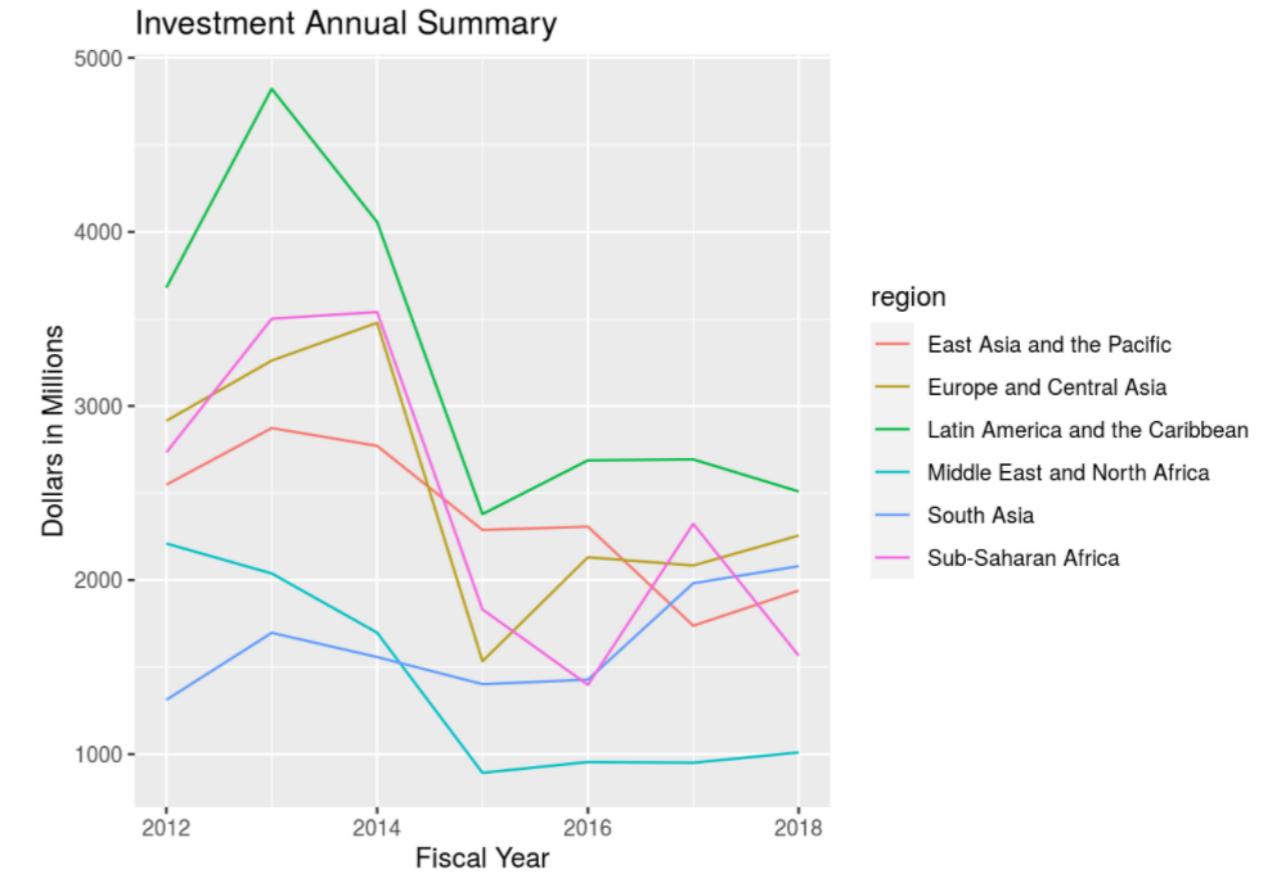


Figure 1.1 The Investment Annual Summary for each region for the 2012 to 2018 fiscal years.

# The eval option

```
44 ````{r tables, eval = FALSE}
45 kable(investment_region_summary, col.names = c("Region", "Dollars in
Millions"), align = "cc", caption = "Table 1.1 The total investment
summary for each region for the 2012 to 2018 fiscal years.")
46 ````
```

```
kable(investment_region_summary, col.names = c("Region", "Dollars in Millions"),
align = "cc", caption = "Table 1.1 The total investment summary for each region
for the 2012 to 2018 fiscal years.")
```

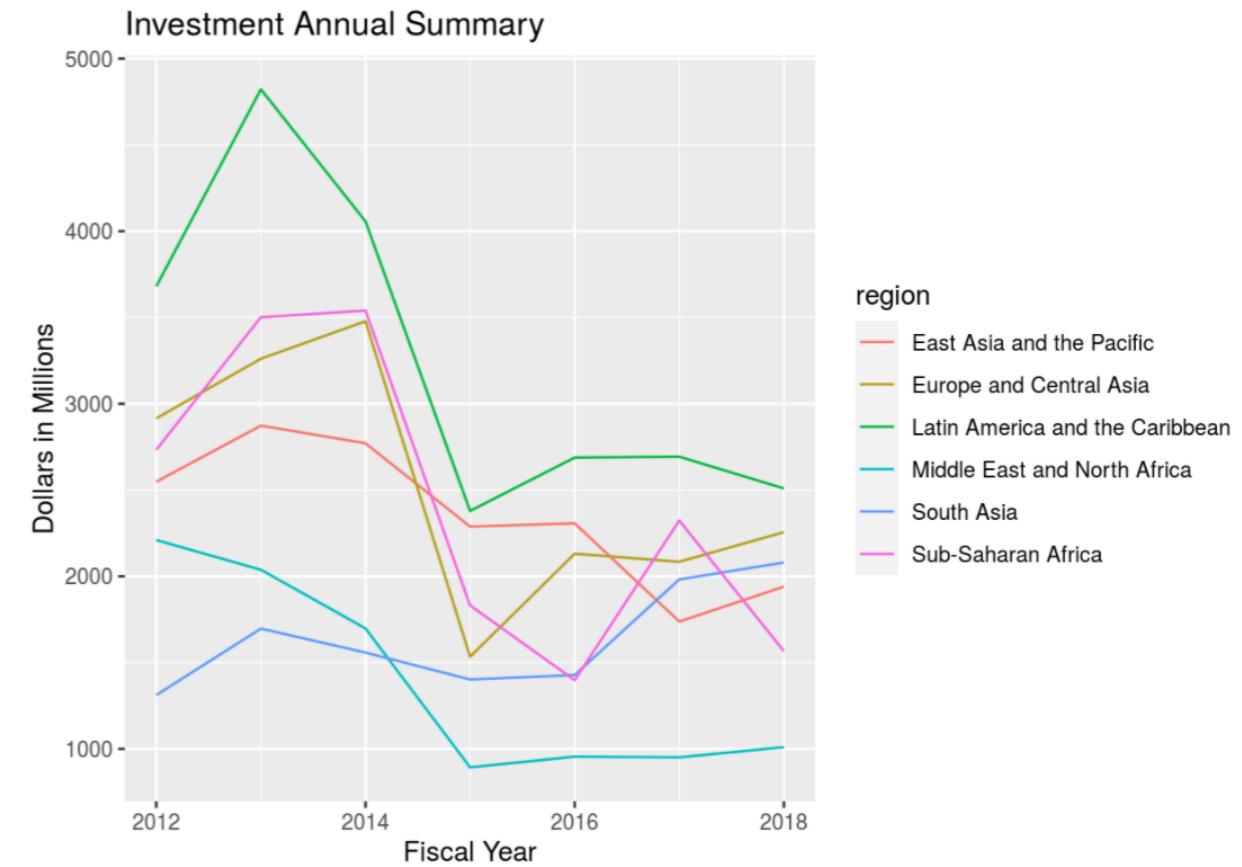


Figure 1.1 The Investment Annual Summary for each region for the 2012 to 2018 fiscal years.

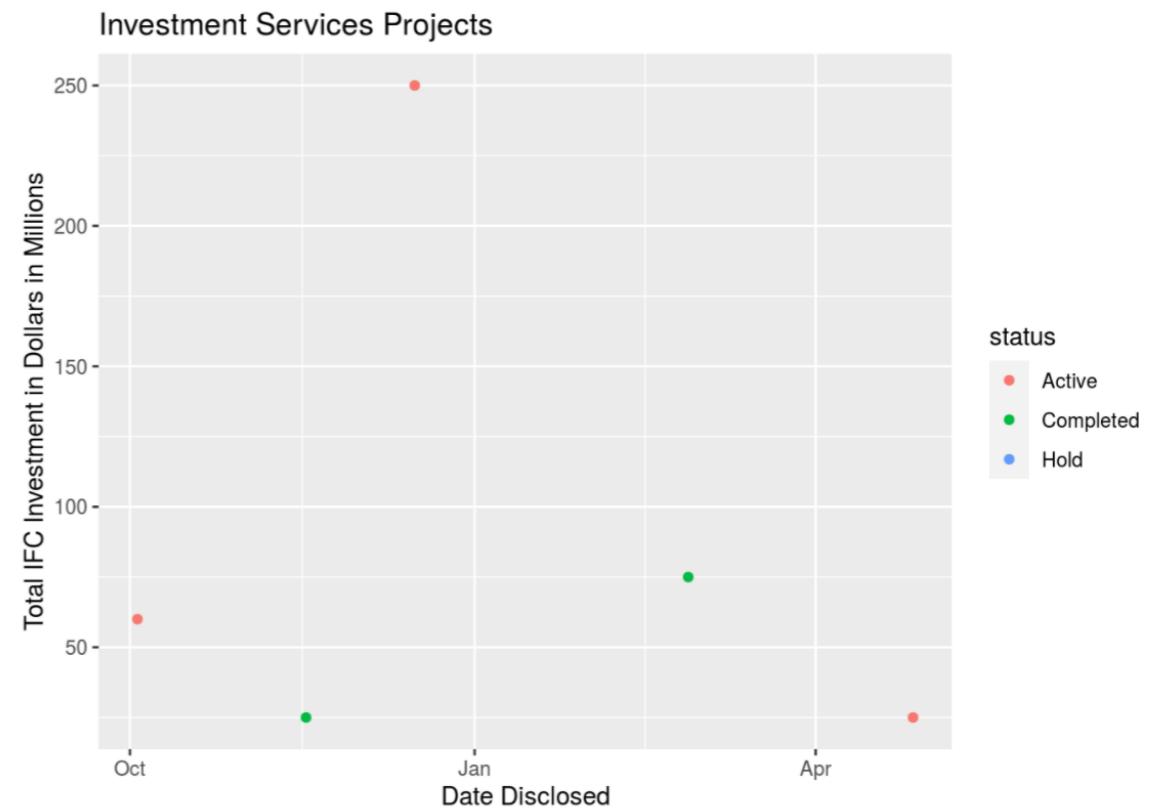
# Code option summary

|                              | <b>Code is run</b> | <b>Code appears in report</b> | <b>Results appear in report</b> |
|------------------------------|--------------------|-------------------------------|---------------------------------|
| <code>include = FALSE</code> | Yes                | No                            | No                              |
| <code>echo = FALSE</code>    | Yes                | No                            | Yes                             |
| <code>eval = FALSE</code>    | No                 | Yes                           | No                              |

# The collapse option

```
67 ````{r indonesia-investment-projects-2012}
68 indonesia_investment_projects_2018 <- investment_services_projects %>%
69 filter(country == "Indonesia",
70 date_disclosed >= "2011-07-01",
71 date_disclosed <= "2012-06-30")
72
73 ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
74 total_investment, color = status)) +
75 geom_point() +
76 labs(
77 title = "Investment Services Projects in Indonesia in 2012",
78 x = "Date Disclosed",
79 y = "Total IFC Investment in Dollars in Millions"
80)````
```

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
 geom_point() +
 labs(
 title = "Investment Services Projects",
 x = "Date Disclosed",
 y = "Total IFC Investment in Dollars in Millions"
)
Warning: Removed 1 rows containing missing values (geom_point).
```



# The collapse option

```
67 ```{r indonesia-investment-projects-2012, collapse = TRUE}
68 indonesia_investment_projects_2018 <- investment_services_projects %>%
69 filter(country == "Indonesia",
70 | | | date_disclosed >= "2011-07-01",
71 | | | date_disclosed <= "2012-06-30")
72
73 ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
74 total_investment, color = status)) +
75 geom_point() +
76 labs(
77 title = "Investment Services Projects in Indonesia in 2012",
78 x = "Date Disclosed",
79 y = "Total IFC Investment in Dollars in Millions"
80)```

```

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
 geom_point() +
 labs(
 title = "Investment Services Projects",
 x = "Date Disclosed",
 y = "Total IFC Investment in Dollars in Millions"
)
Warning: Removed 1 rows containing missing values (geom_point).
```



# Warnings, messages, and errors

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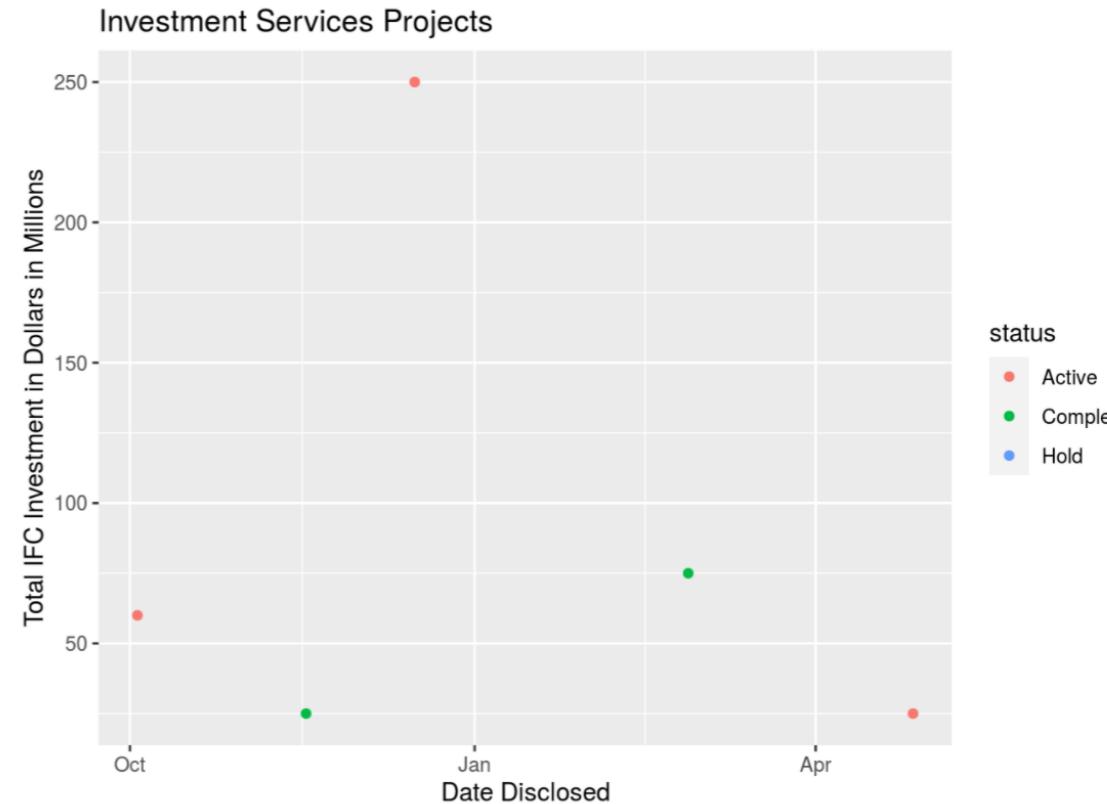
Amy Peterson

Curriculum Manager at DataCamp

# Warnings

```
67 ````{r indonesia-investment-projects-2012}
68 indonesia_investment_projects_2018 <- investment_services_projects %>%
69 filter(country == "Indonesia",
70 date_disclosed >= "2011-07-01",
71 date_disclosed <= "2012-06-30")
72
73 ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
74 total_investment, color = status)) +
75 geom_point() +
76 labs(
77 title = "Investment Services Projects in Indonesia in 2012",
78 x = "Date Disclosed",
79 y = "Total IFC Investment in Dollars in Millions"
80)````
```

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
 geom_point() +
 labs(
 title = "Investment Services Projects",
 x = "Date Disclosed",
 y = "Total IFC Investment in Dollars in Millions"
)
Warning: Removed 1 rows containing missing values (geom_point).
```

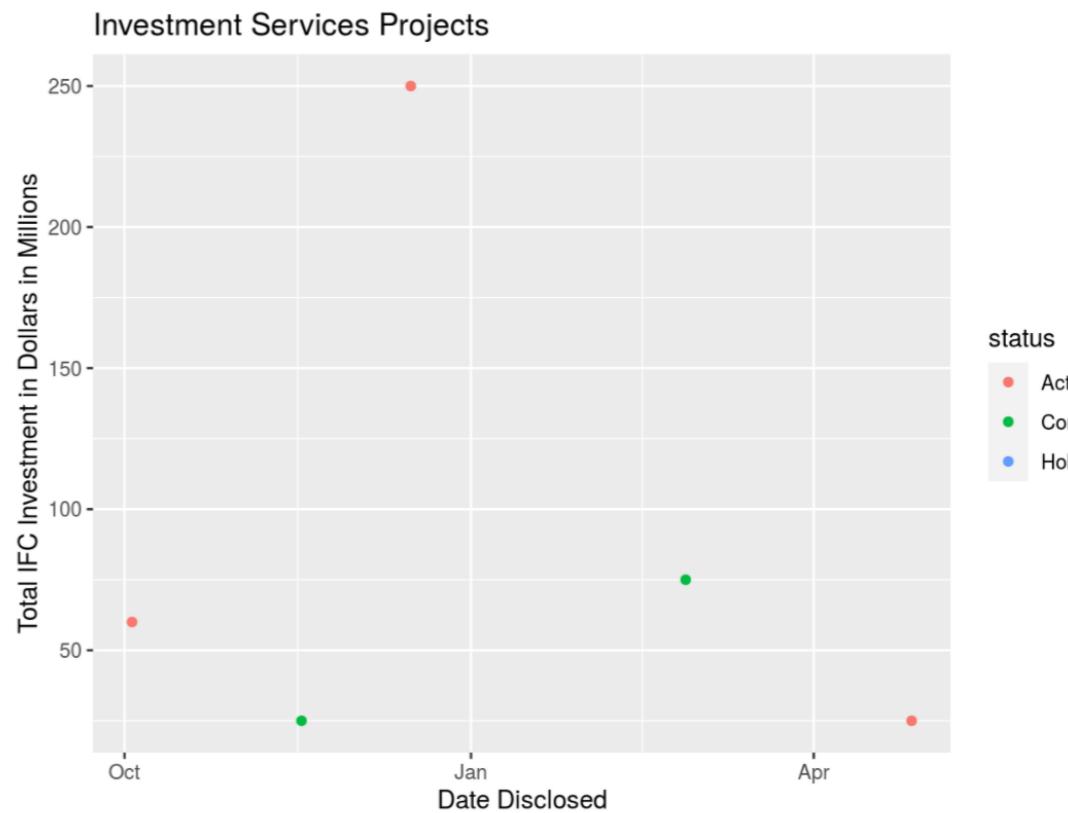


# Warnings

```
67 ```{r indonesia-investment-projects-2012, collapse = TRUE}
68 indonesia_investment_projects_2018 <- investment_services_projects %>%
69 filter(country == "Indonesia",
70 | | | date_disclosed >= "2011-07-01",
71 | | | date_disclosed <= "2012-06-30")
72
73 ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
74 total_investment, color = status)) +
75 geom_point() +
76 labs(
77 title = "Investment Services Projects in Indonesia in 2012",
78 x = "Date Disclosed",
79 y = "Total IFC Investment in Dollars in Millions"
80)```

```

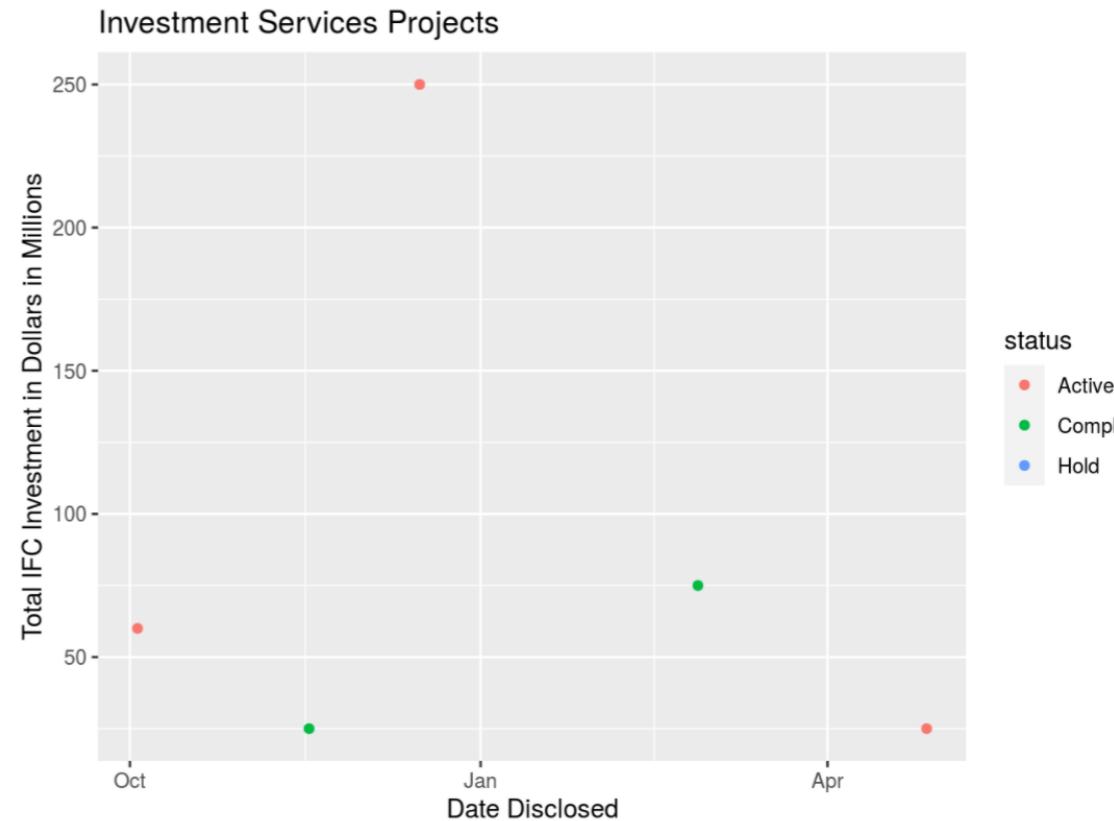
```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
 geom_point() +
 labs(
 title = "Investment Services Projects",
 x = "Date Disclosed",
 y = "Total IFC Investment in Dollars in Millions"
)
Warning: Removed 1 rows containing missing values (geom_point).
```



# Warnings

```
53 ````{r indonesia-investment-projects-2012, warning = FALSE}
54 indonesia_investment_projects_2012 <- investment_services_projects %>%
55 filter(country == "Brazil",
56 date_disclosed >= "2011-07-01",
57 date_disclosed <= "2012-06-30")
58
59 ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
60 total_investment, color = status)) +
61 geom_point() +
62 labs(
63 title = "Investment Services Projects in Indonesia in 2012",
64 x = "Date Disclosed",
65 y = "Total IFC Investment in Dollars in Millions"
66)
````
```

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```



Messages

```
11  ```{r data, include = FALSE}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15  library(knitr)
16
17 investment_annual_summary <- read_csv("https://assets.datacamp.com/
18   production/repositories/5756/datasets/
19   d0251f26117bbcf0ea96ac276555b9003f4f7372/
20   investment_annual_summary.csv")
21 investment_region_summary <- read_csv("https://assets.datacamp.com/
22   production/repositories/5756/datasets/
23   52f5414f6504e0503e86eb1043afa9b3d157fab2/
24   investment_region_summary.csv")
25 investment_services_projects <- read_csv("https://
26   assets.datacamp.com/production/repositories/5756/datasets/
27   bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
28   investment_services_projects.csv")
29 ...
30
```

Messages

```
11  ```{r data}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15
16 investment_annual_summary <- read_csv("https://assets.datacamp.com/
17 production/repositories/5756/datasets/
18 d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
19
20 investment_services_projects <- read_csv("https://assets.datacamp.com/
21 production/repositories/5756/datasets/
22 bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
23 investment_services_projects.csv")
24
25 ````
```

HTML Viewer ↗

Investment Report

28 April 2020

```
library(readr)
library(dplyr)
library(ggplot2)
library(knitr)
```

```
investment_annual_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/in
vestment_annual_summary.csv")
```

```
## Parsed with column specification:
## cols(
##   fiscal_year = col_double(),
##   region = col_character(),
##   dollars_in_millions = col_double()
## )
```

```
investment_region_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/52f5414f6504e0503e86eb1043afa9b3d157fab2/in
vestment_region_summary.csv")
```

```
## Parsed with column specification:
## cols(
```

Messages

```
11  ```{r data, message = FALSE}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15
16 investment_annual_summary <- read_csv("https://assets.datacamp.com/
17 production/repositories/5756/datasets/
18 d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
19
20 investment_services_projects <- read_csv("https://assets.datacamp.com/
21 production/repositories/5756/datasets/
22 bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
23 investment_services_projects.csv")
24
25 ````
```

HTML Viewer ↗

Investment Report

28 April 2020

```
library(readr)
library(dplyr)
library(ggplot2)
library(knitr)

investment_annual_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/in
vestment_annual_summary.csv")
investment_region_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/52f5414f6504e0503e86eb1043afa9b3d157fab2/in
vestment_region_summary.csv")
investment_services_projects <- read_csv("https://assets.datacamp.com/prod
uction/repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec6
4/investment_services_projects.csv")
```

Messages

```
11 ````{r data, message = FALSE}
12 library(readr)
13 library(dplyr)
14 library(ggplot2)
15
16 investment_annual_summary <- read_csv("https://assets.datacamp.com/
17 production/repositories/5756/datasets/
18 d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
19 investment_services_projects <- read_csv("https://assets.datacamp.com/
20 production/repositories/5756/datasets/
21 bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
investment_services_projects.csv")
```

HTML Viewer 



Investment Report

28 April 2020

```
library(readr)
library(dplyr)
library(ggplot2)
library(knitr)

investment_annual_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/in
vestment_annual_summary.csv")
investment_region_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/52f5414f6504e0503e86eb1043afa9b3d157fab2/in
vestment_region_summary.csv")
investment_services_projects <- read_csv("https://assets.datacamp.com/prod
uction/repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec6
4/investment_services_projects.csv")

indonesia_investment_projects <- investment_services_projects %>%
  filter(country == "Indonesia")
```

Errors

```
40  ```{r indonesia-investment-projects, error = TRUE}
41  ggplot(indonesia_investment_projects, aes(x = date_disclosed, y =
42    total_investment, color = status)) +
43    geom_point() +
44    labs(
45      title = "Investment Services Projects in Indonesia",
46      x = "Date Disclosed",
47      y = "Total IFC Investment in Dollars in Millions"
48    )
49  ```

50  ## Error in ggplot(indonesia_investment_projects, aes(x = date_disclosed, : object
51  'indonesia_investment_projects' not found
```

Adding a table of contents

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Amy Peterson

Curriculum Manager at DataCamp

Table of contents

```
1 ---  
2 title: "Investment Report"  
3 output:  
4 | html_document:  
5 | | toc: true  
6 date: "`r format(Sys.time(), '%d %B %Y')`"  
7 ---
```

Investment Report

08 May 2020

- Datasets
 - Investment Annual Summary
 - Investment Projects from the 2012 to 2018 Fiscal Years
 - Investment Projects in 2018

TOC depth

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_depth: 2  
7 date: "`r format(Sys.time(), '%d %B %Y')`"  
8 ---  
9  
10 ````{r setup, include = FALSE}  
11 knitr::opts_chunk$set(fig.align = 'center', echo = TRUE)  
12 ````  
13  
14 ````{r data, include = FALSE}  
15 library(readr)  
16 library(dplyr)  
17 library(ggplot2)  
18  
19 investment_annual_summary <- read_csv("https://assets.datacamp.com/  
production/repositories/5756/datasets/  
d0251f26117bbcfc0ea96ac276555b9003f4f7372/investment_annual_summary.csv")  
20 investment_services_projects <- read_csv("https://assets.datacamp.com/  
production/repositories/5756/datasets/  
bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/  
investment_services_projects.csv")  
21 ````  
22  
23  
24 ## Datasets  
25  
26 ### Investment Annual Summary  
27 The `investment_annual_summary` dataset provides a summary of the
```

Investment Report

08 May 2020

- Datasets

Datasets

Investment Annual Summary

Number sections

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_depth: 2  
7     number_sections: true  
8 date: "`r format(Sys.time(), '%d %B %Y')`"  
9 ---
```

Investment Report

08 May 2020

- 0.1 Datasets
 - 0.1.1 Investment Annual Summary
 - 0.1.2 Investment Projects from the 2012 to 2018 Fiscal Years
 - 0.1.3 Investment Projects in 2018

Number sections

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_depth: 2  
7     number_sections: true  
8 date: "`r format(Sys.time(), '%d %B %Y')`"  
9 ---  
10 ````{r setup, include = FALSE}  
11 knitr::opts_chunk$set(fig.align = 'center', echo = TRUE)  
12 ````  
13  
14 ````{r data, include = FALSE}  
15 library(readr)  
16 library(dplyr)  
17 library(ggplot2)  
18  
19 investment_annual_summary <- read_csv("https://assets.datacamp.com/  
20 production/repositories/5756/datasets/  
21 d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")  
22 investment_services_projects <- read_csv("https://assets.datacamp.com/  
23 production/repositories/5756/datasets/  
24 bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/investment_services_projects.csv")  
25  
26  
27 ## Datasets  
28  
29 ### Investment Annual Summary
```

Investment Report

08 May 2020

- 0.1 Datasets
 - 0.1.1 Investment Annual Summary
 - 0.1.2 Investment Projects from the 2012 to 2018 Fiscal Years
 - 0.1.3 Investment Projects in 2018

TOC float

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float: true  
7     toc_depth: 3  
8 date: "`r format(Sys.time(), '%d %B %Y')`"  
9 ---
```

investment_report.Rmd

1 ---
2 title: "Investment Report"
3 output:
4 html_document:
5 toc: true
6 toc_float: true
7 toc_depth: 3
8 date: "`r format(Sys.time(), '%d %B %Y')`"
9 ---
10 |
11 ``{r setup, include = FALSE}
12 knitr::opts_chunk\$set(fig.align = 'center', echo = TRUE)
13 ``
14
15 ``{r data, include = FALSE}
16 library(readr)
17 library(dplyr)
18 library(ggplot2)
19
20 investment_annual_summary <- read_csv("https://assets.datacamp.com/production/
repositories/5756/datasets/d0251f26117bbcfc0ea96ac276555b9003f4f7372/
investment_annual_summary.csv")
21 investment_services_projects <- read_csv("https://assets.datacamp.com/production/
repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
investment_services_projects.csv")
22
23
24 ## Datasets
25
26 ### Investment Annual Summary
27 The `investment_annual_summary` dataset provides a summary of the dol

Knit HTML

TOC float: collapsed

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float:  
7       collapsed: false  
8     toc_depth: 3  
9 date: "`r format(Sys.time(), '%d %B %Y')`"  
10 ---
```

investment_report.Rmd

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float:  
7       collapsed: false  
8     toc_depth: 3  
9 date: "`r format(Sys.time(), '%d %B %Y')`"  
10 ---  
11 ```{r setup, include = FALSE}  
12 knitr::opts_chunk$set(fig.align = 'center', echo = TRUE)  
13 ...  
14 ...  
15 ...  
16 ...  
17 library(readr)  
18 library(dplyr)  
19 library(ggplot2)  
20 ...  
21 investment_annual_summary <- read_csv("https://assets.datacamp.com/production/  
repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/  
investment_annual_summary.csv")  
22 investment_services_projects <- read_csv("https://assets.datacamp.com/production/  
repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/  
investment_services_projects.csv")  
23 ...  
24 ...  
25 ## Datasets  
26 ...  
27 ### Investment Annual Summary  
28 The `investment_annual_summary` dataset provides a summary of the doll
```

Knit HTML

TOC float: smooth scroll

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float:  
7       collapsed: false  
8       smooth_scroll: false  
9     toc_depth: 3  
10    date: "`r format(Sys.time(), '%d %B %Y')`"  
11 ---
```

investment_report.Rmd

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float:  
7       collapsed: false  
8       smooth_scroll: false  
9     toc_depth: 3  
10    date: "`r format(Sys.time(), '%d %B %Y')`"  
11 ---  
12 ```{r setup, include = FALSE}  
13 knitr::opts_chunk$set(fig.align = 'center', echo = TRUE)  
14 ...  
15 |  
16 ```{r data, include = FALSE}  
17 library(readr)  
18 library(dplyr)  
19 library(ggplot2)  
20  
21 investment_annual_summary <- read_csv("https://assets.datacamp.com/production/  
repositories/5756/datasets/d0251f26117bbcfc0ea96ac276555b9003f4f7372/  
investment_annual_summary.csv")  
22 investment_services_projects <- read_csv("https://assets.datacamp.com/production/  
repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/  
investment_services_projects.csv")  
23 ...  
24  
25  
26 ## Datasets  
27  
28 ### Investment Annual Summary
```

Knit HTML

Summary

- `toc`
 - `toc_depth`
 - HTML default: 3
 - PDF default: 2
 - `number_sections`
- HTML
- `toc_float`
 - `collapsed`
 - `smooth_scroll`

Creating a report with a parameter

REPORTING WITH R MARKDOWN



Amy Peterson

Curriculum Manager at DataCamp

Parameters

- Create reports for different countries
- Add inputs to the YAML header

Adding a parameter

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float: true  
7 date: `r format(Sys.time(), '%d %B %Y')`  
8 params:  
9   country: Indonesia  
10 ---
```

Reviewing the code

```
42   ```{r indonesia-investment-projects}
43   indonesia_investment_projects <- investment_services_projects %>%
44     filter(country == "Indonesia")
45
46   ggplot(indonesia_investment_projects, aes(x = date_disclosed, y =
47     total_investment, color = status)) +
48     geom_point() +
49     labs(
50       title = "Investment Services Projects in Indonesia",
51       x = "Date Disclosed",
52       y = "Total IFC Investment in Dollars in Millions"
53     )
54   ``
```

Reviewing the code

```
42  ```{r country-investment-projects}
43  country_investment_projects <- investment_services_projects %>%
44    filter(country == "Indonesia")
45
46 ggplot(country_investment_projects, aes(x = date_disclosed, y =
47   total_investment, color = status)) +
48   geom_point() +
49   labs(
50     title = "Investment Services Projects in Indonesia",
51     x = "Date Disclosed",
52     y = "Total IFC Investment in Dollars in Millions"
53   )
54 ````
```

Reviewing the code

```
42   ```{r country-investment-projects}
43   country_investment_projects <- investment_services_projects %>%
44     | filter(country == "Indonesia")
45
46   ggplot(country_investment_projects, aes(x = date_disclosed, y =
47     total_investment, color = status)) +
48     | geom_point() +
49     | labs(
50       |   title = "Investment Services Projects in Indonesia",
51       |   x = "Date Disclosed",
52       |   y = "Total IFC Investment in Dollars in Millions"
53     )
```

Reviewing the code

```
42   ```{r country-investment-projects}
43   country_investment_projects <- investment_services_projects %>%
44     | filter(country == params$country)
45
46   ggplot(country_investment_projects, aes(x = date_disclosed, y =
47     total_investment, color = status)) +
48     | geom_point() +
49     | labs(
50       |   title = "Investment Services Projects in Indonesia",
51       |   x = "Date Disclosed",
52       |   y = "Total IFC Investment in Dollars in Millions"
53     )
```

Reviewing the code

```
42   ```{r country-investment-projects}
43   country_investment_projects <- investment_services_projects %>%
44     | filter(country == params$country)
45
46   ggplot(country_investment_projects, aes(x = date_disclosed, y =
47     total_investment, color = status)) +
48     | geom_point() +
49     | labs(
50       |   title = "Investment Services Projects in Indonesia",
51       |   x = "Date Disclosed",
52       |   y = "Total IFC Investment in Dollars in Millions"
53     )
54   ````
```

Reviewing the code

```
42   ```{r country-investment-projects}
43   country_investment_projects <- investment_services_projects %>%
44     | filter(country == params$country)
45
46   ggplot(country_investment_projects, aes(x = date_disclosed, y =
47     total_investment, color = status)) +
48     | geom_point() +
49     | labs(
50       |   title = "Investment Services Projects",
51       |   x = "Date Disclosed",
52       |   y = "Total IFC Investment in Dollars in Millions"
53     )
54   ````
```

Reviewing the text

```
39  ### Investment Projects in Indonesia
40  The `investment_services_projects` dataset provides information
   about each investment project in Indonesia from 2012 to 2018.
   Information listed includes the project name, company name,
   sector, project status, and investment amounts.
```

Reviewing the text

```
39  ### Investment Projects in `r params$country`  
40  The `investment_services_projects` dataset provides information  
about each investment project in `r params$country` from 2012 to  
2018. Information listed includes the project name, company name,  
sector, project status, and investment amounts.
```

Reviewing the YAML header

```
1 ---  
2 title: "Investment Report"  
3 output:  
4   | html_document:  
5   |   | toc: true  
6   |   | toc_float: true  
7 date: "`r format(Sys.time(), '%d %B %Y')`"  
8 params:  
9   | country: Indonesia  
10 ---
```

```
1 ---  
2 title: "Investment Report for Projects in `r params$country`"  
3 output:  
4   | html_document:  
5   |   | toc: true  
6   |   | toc_float: true  
7 date: "`r format(Sys.time(), '%d %B %Y')`"  
8 params:  
9   | country: Indonesia  
10 ---
```

Knitting the report

```
1 ---  
2 title: "Investment Report for Projects in `r params$country`"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float: true  
7 date: "`r format(Sys.time(), '%d %B %Y')`"  
8 params:  
9   country: Turkey  
10 ---
```

Datasets

Investment Report for Projects in Turkey

08 May 2020

Datasets

Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, color = region))  
+  
  geom_line() +  
  labs(  
    title = "Investment Annual Summary",  
    x = "Fiscal Year",  
    y = "Dollars in Millions"  
)
```

Knitting a new report

```
1 ---  
2 title: "Investment Report for Projects in `r params$country`"  
3 output:  
4   | html_document:  
5   |   | toc: true  
6   |   | toc_float: true  
7 date: "`r format(Sys.time(), '%d %B %Y')`"  
8 params:  
9   | country: Philippines  
10 ---
```

Datasets

Investment Report for Projects in Philippines

08 May 2020

Datasets

Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, color = region))  
+  
  geom_line() +  
  labs(  
    title = "Investment Annual Summary",  
    x = "Fiscal Year",  
    y = "Dollars in Millions"  
  )
```

Multiple parameters

REPORTING WITH R MARKDOWN



Amy Peterson

Curriculum Manager at DataCamp

Fiscal year

- 2012 to 2018 fiscal years
- July 1st (previous year) - June 30th (year of interest)

Adding a parameter for fiscal year

```
1 ---  
2 title: "Investment Report for Projects in `r params$country`"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float: true  
7 date: "`r format(Sys.time(), '%d %B %Y')`"  
8 params:  
9   country: Indonesia  
10  fy: 2012  
11 ---
```

Adding parameters to define fiscal year

```
1 ---  
2 title: "Investment Report for Projects in `r params$country`"  
3 output:  
4   html_document:  
5     toc: true  
6     toc_float: true  
7 date: "`r format(Sys.time(), '%d %B %Y')`"  
8 params:  
9   country: Indonesia  
10  year_start: 2011-07-01  
11  year_end: 2012-06-30  
12  fy: 2012  
13 ---
```

Reviewing the code

```
61  ```{r country-investment-projects-2012}
62  country_investment_projects_2012 <- investment_services_projects %>%
63    filter(country == params$country,
64           date_disclosed >= "2011-07-01",
65           date_disclosed <= "2012-06-30")
66
67 ggplot(country_investment_projects_2012, aes(x = date_disclosed, y =
68   total_investment, color = status)) +
69   geom_point() +
70   labs(
71     title = "Investment Services Projects",
72     x = "Date Disclosed",
73     y = "Total IFC Investment in Dollars in Millions"
74   )
75 ````
```

Reviewing the code

```
61  ```{r country-investment-projects-2012}
62  country_investment_projects_2012 <- investment_services_projects %>%
63    | filter(country == params$country,
64    |     | date_disclosed >= params$year_start,
65    |     | date_disclosed <= params$year_end)
66
67 ggplot(country_investment_projects_2012, aes(x = date_disclosed, y =
68   total_investment, color = status)) +
69   geom_point() +
70   labs(
71     title = "Investment Services Projects",
72     x = "Date Disclosed",
73     y = "Total IFC Investment in Dollars in Millions"
74   )
```

```

# Reviewing the code

```
61 ```{r country-investment-projects-2012}
62 country_investment_projects_2012 <- investment_services_projects %>%
63 filter(country == params$country,
64 date_disclosed >= params$year_start,
65 date_disclosed <= params$year_end)
66
67 ggplot(country_investment_projects_2012, aes(x = date_disclosed, y =
68 total_investment, color = status)) +
69 geom_point() +
70 labs(
71 title = "Investment Services Projects",
72 x = "Date Disclosed",
73 y = "Total IFC Investment in Dollars in Millions"
74)
75 ````
```

# Reviewing the code

```
61 ```{r country-annual-investment-projects}
62 country_annual_investment_projects <- investment_services_projects %>%
63 filter(country == params$country,
64 date_disclosed >= params$year_start,
65 date_disclosed <= params$year_end)
66
67 ggplot(country_annual_investment_projects, aes(x = date_disclosed, y
68 = total_investment, color = status)) +
69 geom_point() +
70 labs(
71 title = "Investment Services Projects",
72 x = "Date Disclosed",
73 y = "Total IFC Investment in Dollars in Millions"
74)
75 ````
```

# Reviewing the text

```
59 ### Investment Projects in `r params$country` in 2012
60 The `investment_services_projects` dataset was filtered below to focus on
information about each investment project from the 2012 fiscal year, and
is referred to as `country_annual_investment_projects`.
```

# Reviewing the text

```
59 ### Investment Projects in `r params$country` in `r params$fy`
60 The `investment_services_projects` dataset was filtered below to focus on
information about each investment project from the `r params$fy` fiscal
year, and is referred to as `country_annual_investment_projects`.
```

# Reviewing the YAML header

```
1 ---
2 title: "Investment Report for Projects in `r params$country`"
3 output:
4 html_document:
5 toc: true
6 toc_float: true
7 date: "`r format(Sys.time(), '%d %B %Y')`"
8 params:
9 country: Indonesia
10 year_start: 2011-07-01
11 year_end: 2012-06-30
12 fy: 2012
13 ---
```

# Knitting the report

```
1 ---
2 title: "Investment Report for Projects in `r params$country`"
3 output:
4 html_document:
5 toc: true
6 toc_float: true
7 date: "`r format(Sys.time(), '%d %B %Y')`"
8 params:
9 country: Turkey
10 year_start: 2012-07-01
11 year_end: 2013-06-30
12 fy: 2013
13 ---
```

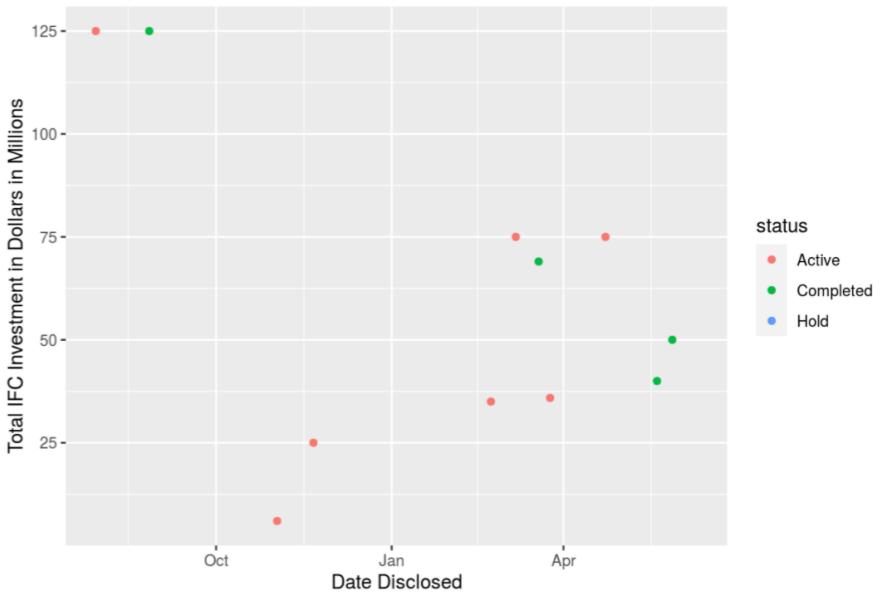
Datasets  
Investment Annual Summary  
Investment Projects from the 2012 to 2018 Fiscal Years  
Investment Projects in Turkey in 2013

## Investment Projects in Turkey in 2013

```
country_annual_investment_projects <- investment_services_projects %>%
 filter(country == params$country) %>%
 filter(date_disclosed >= params$year_start,
 date_disclosed <= params$year_end)

ggplot(country_annual_investment_projects, aes(x = date_disclosed, y = total_investment, color =
status)) +
 geom_point() +
 labs(
 title = "Investment Services Projects",
 x = "Date Disclosed",
 y = "Total IFC Investment in Dollars in Millions"
)
```

Investment Services Projects



# Customizing the report

REPORTING WITH R MARKDOWN



Amy Peterson

Curriculum Manager at DataCamp

# Specifying element style

```
15 <style>
16
17
18
19 </style>
```

- color
- background-color
- font-family
- font-size

# Document style

```
15 <style>
16 body {
17 color: red;
18 }
19 </style>
```



## Investment Report for Projects in Brazil

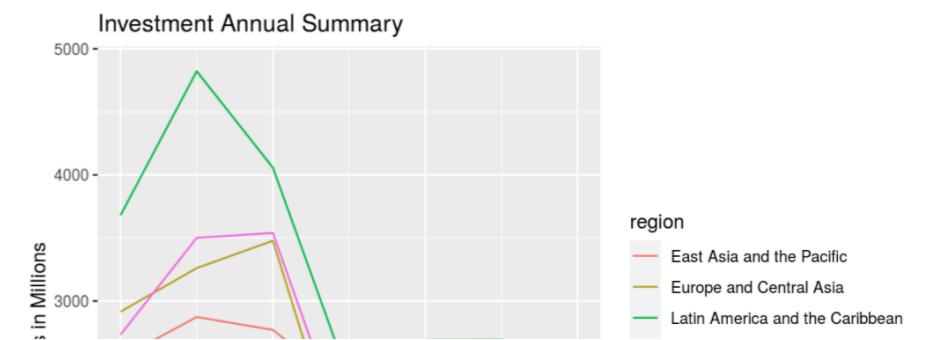
08 May 2020

### Datasets

#### Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, color = region)) +
 geom_line() +
 labs(
 title = "Investment Annual Summary",
 x = "Fiscal Year",
 y = "Dollars in Millions"
)
```



# Using color hex codes

```
15 <style>
16 body {
17 color: #708090;
18 font-family: Calibri;
19 background-color: #F5F5F5;
20 }
21 </style>
```

| Datasets                                               |
|--------------------------------------------------------|
| Investment Annual Summary                              |
| Investment Projects from the 2012 to 2018 Fiscal Years |
| Investment Projects in Brazil in 2018                  |

## Investment Report for Projects in Brazil

08 May 2020

### Datasets

#### Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, color = region)) +
 geom_line() +
 labs(
 title = "Investment Annual Summary",
 x = "Fiscal Year",
 y = "Dollars in Millions"
)
```



# Code chunks

```
15 <style>
16 body {
17 color: #708090;
18 font-family: Calibri;
19 background-color: #F5F5F5;
20 }
21 pre {
22 color: #708090;
23 background-color: #F8F8FF;
24 }
25 </style>
```



## Investment Report for Projects in Brazil

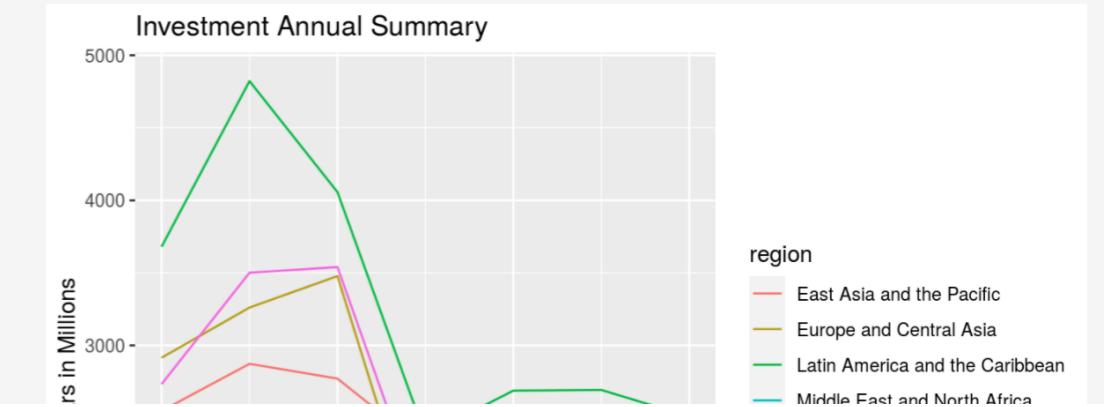
08 May 2020

### Datasets

#### Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, c
olor = region)) +
 geom_line() +
 labs(
 title = "Investment Annual Summary",
 x = "Fiscal Year",
 y = "Dollars in Millions"
)
```



# The table of contents

```
15 <style>
16 #TOC {
17 color: #708090;
18 font-family: Calibri;
19 font-size: 16px;
20 border-color: #708090;
21 }
22 body {
23 color: #708090;
24 font-family: Calibri;
25 background-color: #F5F5F5;
26 }
27 pre {
28 color: #708090;
29 background-color: #F8F8FF;
30 }
31 </style>
```

| Datasets                                               |
|--------------------------------------------------------|
| Investment Annual Summary                              |
| Investment Projects from the 2012 to 2018 Fiscal Years |
| Investment Projects in Brazil in 2018                  |

## Investment Report for Projects in Brazil

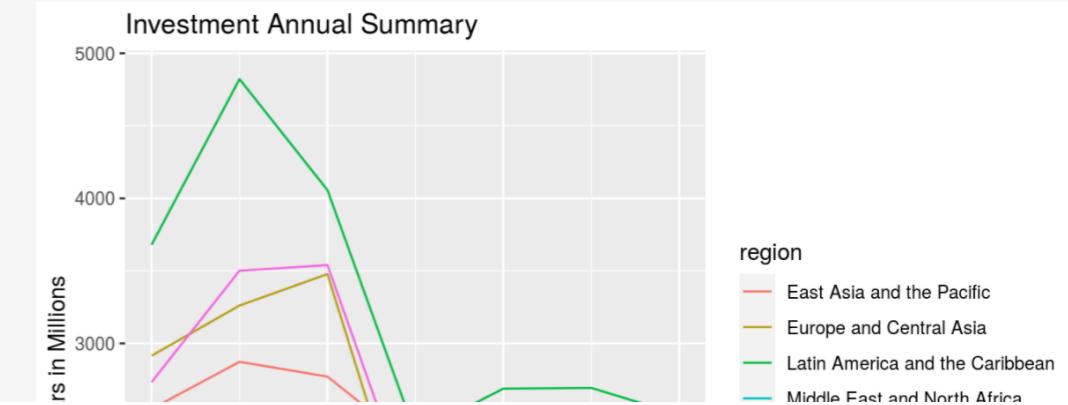
08 May 2020

### Datasets

#### Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, color = region)) +
 geom_line() +
 labs(
 title = "Investment Annual Summary",
 x = "Fiscal Year",
 y = "Dollars in Millions"
)
```



# The header

```
22 #header {
23 color: #800000;
24 background-color: #F5F5F5;
25 opacity: 0.6;
26 font-family: Calibri;
27 font-size: 20px;
28 }
```

| Datasets                                               |
|--------------------------------------------------------|
| Investment Annual Summary                              |
| Investment Projects from the 2012 to 2018 Fiscal Years |
| Investment Projects in Brazil in 2018                  |

## Investment Report for Projects in Brazil

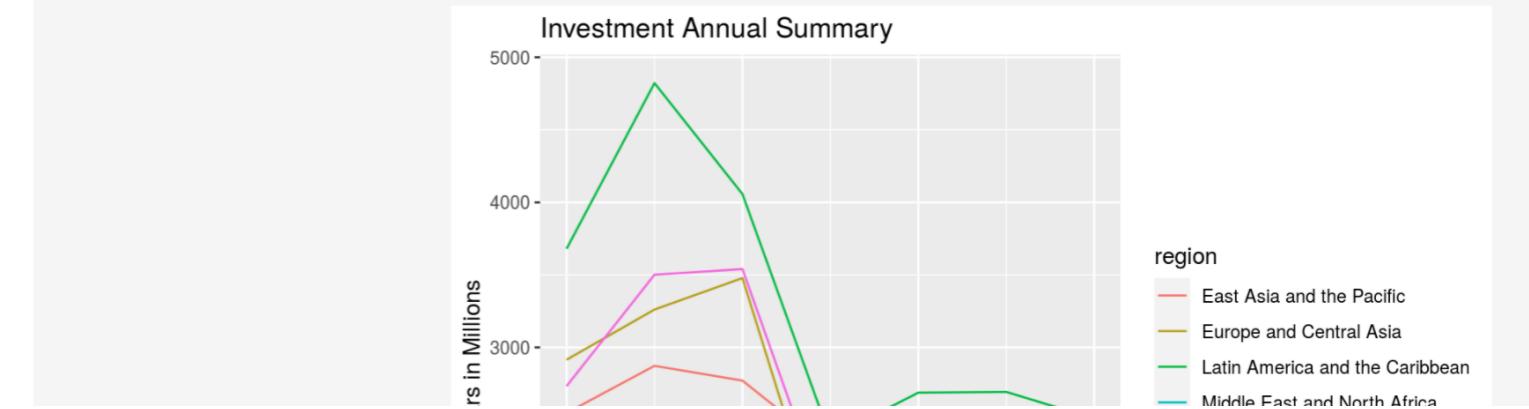
08 May 2020

### Datasets

#### Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, c
olor = region)) +
 geom_line() +
 labs(
 title = "Investment Annual Summary",
 x = "Fiscal Year",
 y = "Dollars in Millions"
)
```



# The title, author, and date

```
22 h1.title {
23 color: #800000;
24 background-color: #F5F5F5;
25 opacity: 0.6;
26 font-family: Calibri;
27 font-size: 40px;
28 }
29 h4.author {
30 color: #708090;
31 font-family: Calibri;
32 }
33 h4.date {
34 color: #708090;
35 font-family: Calibri;
36 }
```

| Datasets                                               |
|--------------------------------------------------------|
| Investment Annual Summary                              |
| Investment Projects from the 2012 to 2018 Fiscal Years |
| Investment Projects in Brazil in 2018                  |

## Investment Report for Projects in Brazil

08 May 2020

### Datasets

#### Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

```
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, color = region)) +
 geom_line() +
 labs(
 title = "Investment Annual Summary",
 x = "Fiscal Year",
 y = "Dollars in Millions"
)
```



# CSS file

```
1 ---
2 title: "Investment Report for Projects in `r params$country`"
3 output:
4 html_document:
5 css: styles.css
6 toc: true
7 toc_float: true
8 date: "`r format(Sys.time(), '%d %B %Y')`"
9 params:
10 country: Brazil
11 year_start: 2017-07-01
12 year_end: 2018-06-30
13 fy: 2018
14 ---
```

| investment_report.Rmd | styles.css                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | 1 #TOC {<br>2   color: #708090;<br>3   font-family: Calibri;<br>4   font-size: 16px;<br>5   border-color: #708090;<br>6 }<br>7 h1.title {<br>8   color: #F08080;<br>9   background-color: #F5F5F5;<br>10  opacity: 0.6;<br>11  font-family: Calibri;<br>12  font-size: 20px;<br>13 }<br>14 h4.author {<br>15  color: #708090;<br>16  font-family: Calibri;<br>17  background-color: #F5F5F5;<br>18 }<br>19 h4.date {<br>20  color: #708090;<br>21  font-family: Calibri;<br>22  background-color: #F5F5F5;<br>23 }<br>24 body { |