

# COW 58



How do we best exploit *Continuous Integration* as a means of GI deployment and what research questions does CI deployment pose?

Marinos & Group!



# RESEARCH QUESTIONS

What research questions does CI deployment pose?

*It depends*

What do we want to achieve with GI?

# Continuous Integration



```
# Make a table|
Create a subset of the mtcars data.
-<br>
-<br>
{r message=FALSE}
library(dplyr)
# extracts a subset of the mtcars data
df <- mtcars %>%
  mutate(make_model = row.names(mtcars)) %>%
  filter(cyl == 4) %>%
  select(make_model, mpg, wt) %>%
  mutate(wt = wt*1000) %>%
  arrange(make_model)

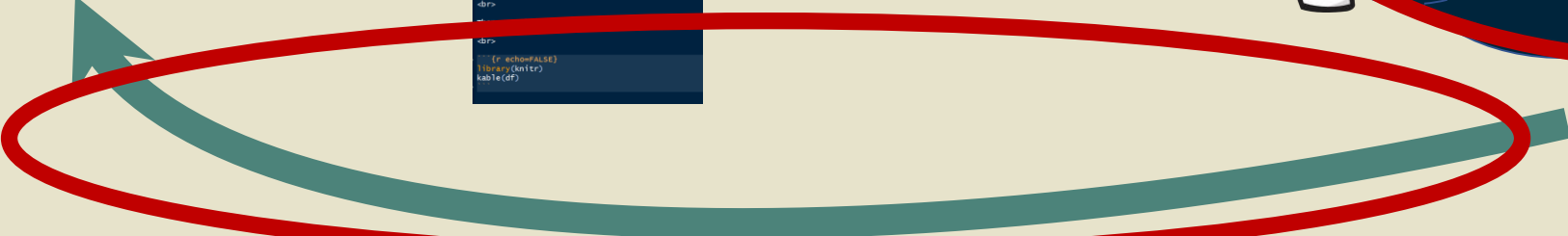
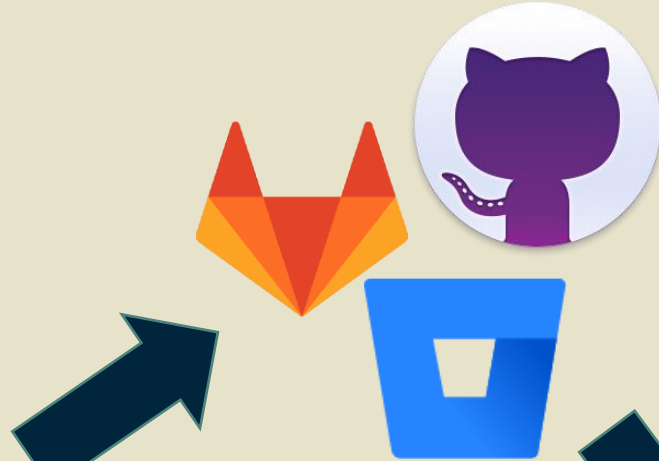
-<br>
-<br>
Then use "knitr::kable()" to create the table.
-<br>
-<br>
{r echo=FALSE}
library(knitr)
kable(df)
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## GI and CI: Research Question 1



At which stage of the CI pipeline should we apply GI?

Should GI run after each commit?

Should GI run during the night or at weekends?

## GI and CI: Research Question 2



Can we design efficient GI processes?

Can we leverage the incremental nature of GI?

Can we leverage change information to restrict GI's search space?

## GI and CI: Research Question 3



Can GI learn from CI historical data?

Can GI learn from previous developer decisions?

## GI and CI: Research Question 4



Can we estimate the effort that GI requires to target a problem?

How much time does GI need to fix my bug?

Can we have a budget-based GI?



□ NOW  
□ LATER



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