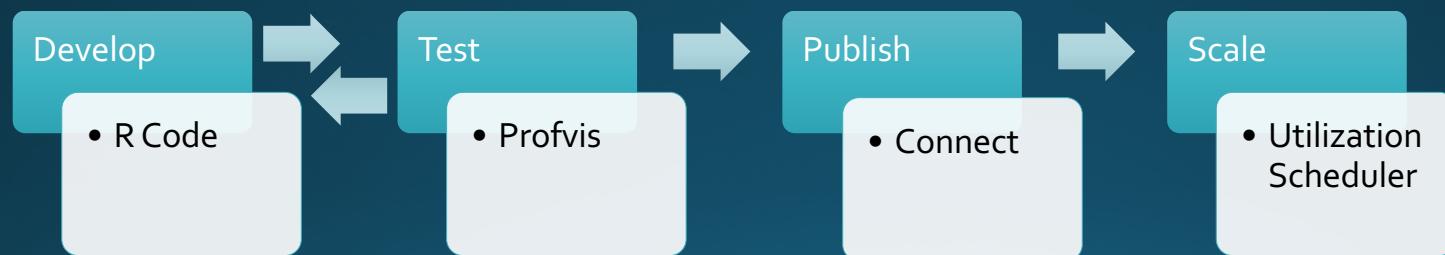


Tonya Filz

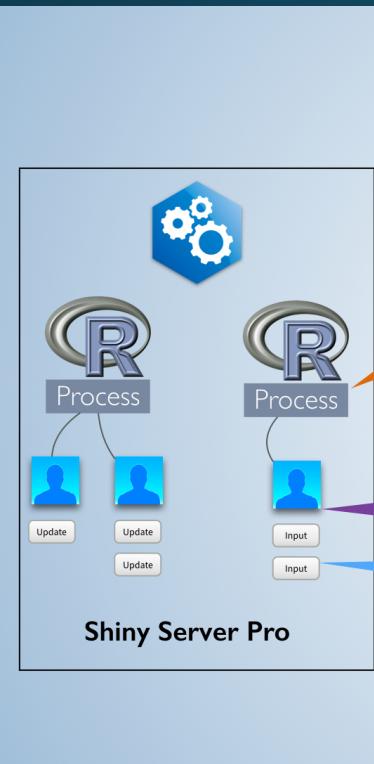
Speeding up Shiny Apps



Shiny Flow Chart



Develop: Efficient Shiny Code



The diagram illustrates the Shiny Server Pro architecture. It shows two separate R processes running within a single server instance. Each process is connected to multiple client connections. A blue callout points to the first connection in each process, stating: "Code inside of a reactive function will be run once per reaction". A purple callout points to the second connection in the left process, stating: "Code inside the server function will be run once per connection". An orange callout points to the top connection in the right process, stating: "Code outside the server function will be run once per R process".

```
library(shiny)
big.data <- read.csv(...)

ui <- fluidPage(
  sliderInput(inputId = "num",
    label = "Choose a number",
    value = 25, min = 1,
    max = 100),
  plotOutput("hist")
)

server <- function(input, output) {
  output$hist <- renderPlot({
    hist(rnorm(input$num))
  })
}

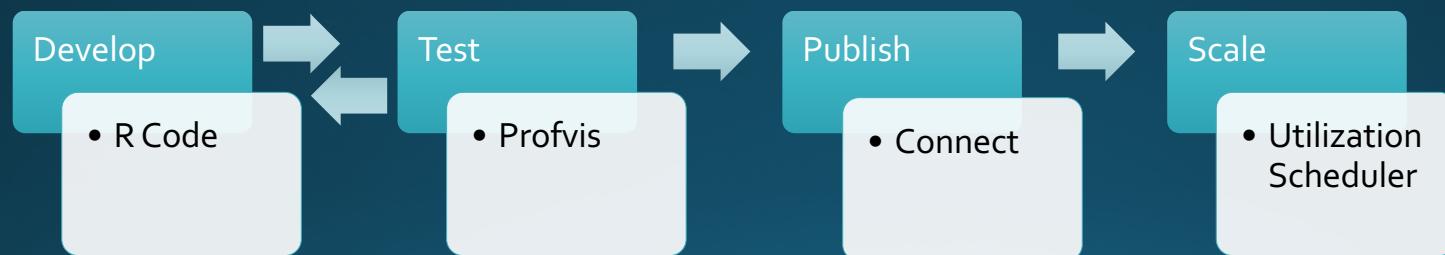
shinyApp(ui = ui, server = server)
```



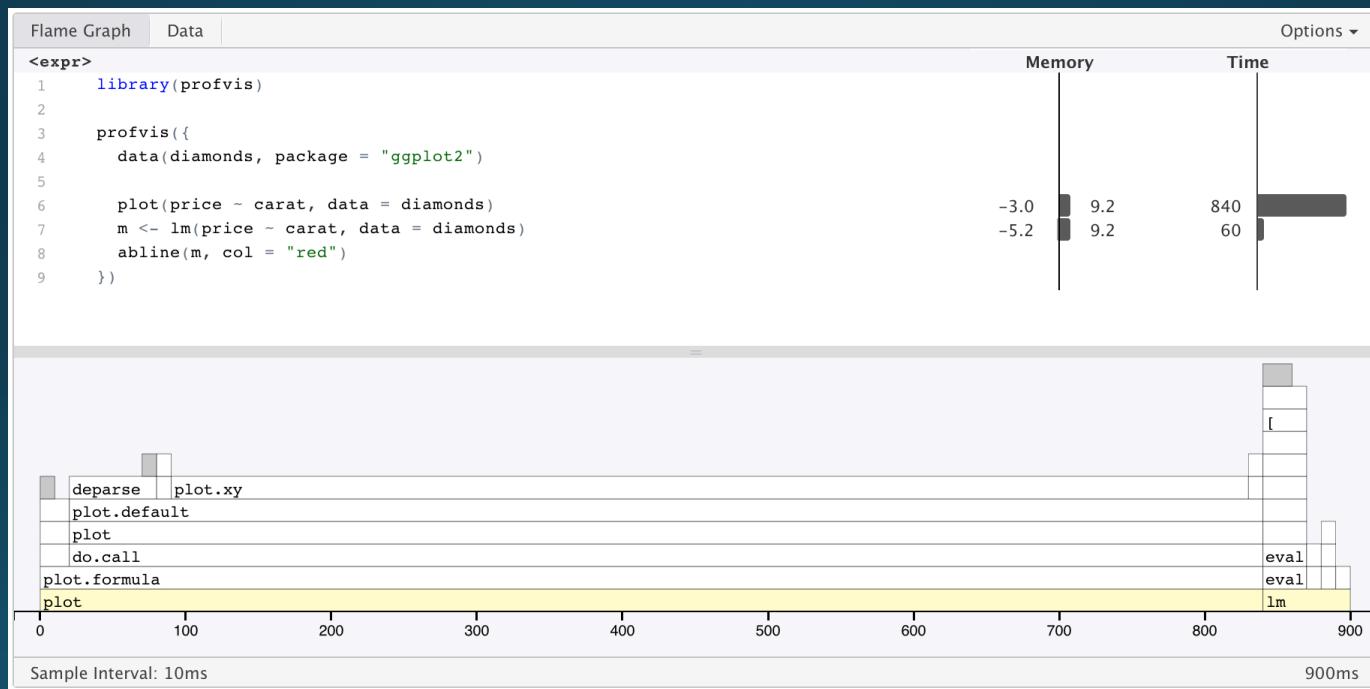
We have an app!



Shiny Flow Chart



Testing: Profvis

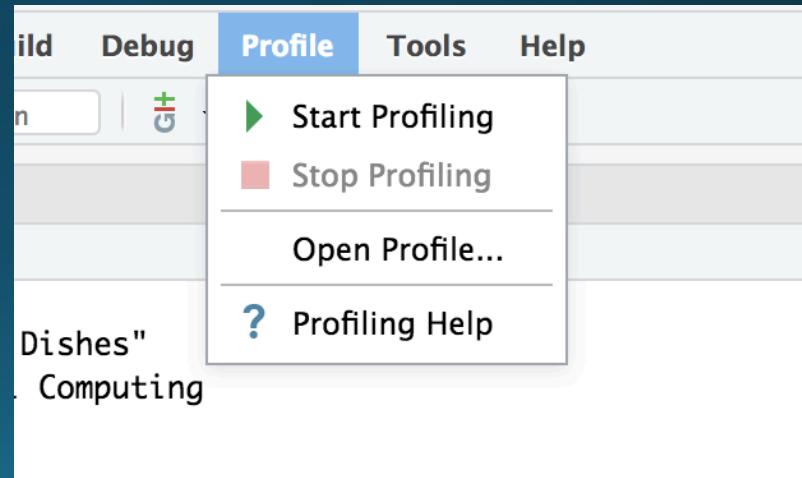


Testing: Using Profvis

Hard way ☹

```
profvis({  
  R script  
})  
  
profvis({  
  rmarkdown::run("file name.Rmd")  
})  
  
profvis({  
  runApp(appDir = "app.R", display.mode = "normal")  
})
```

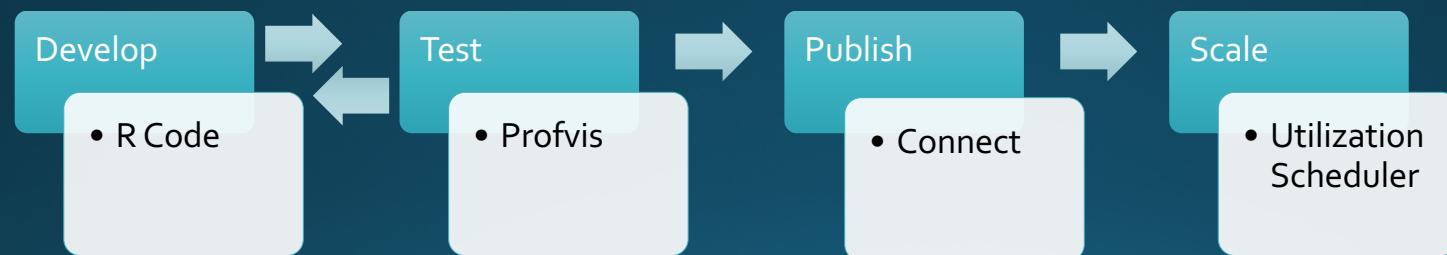
Easy Way ☺



Profvis Demo



Shiny Flow Chart

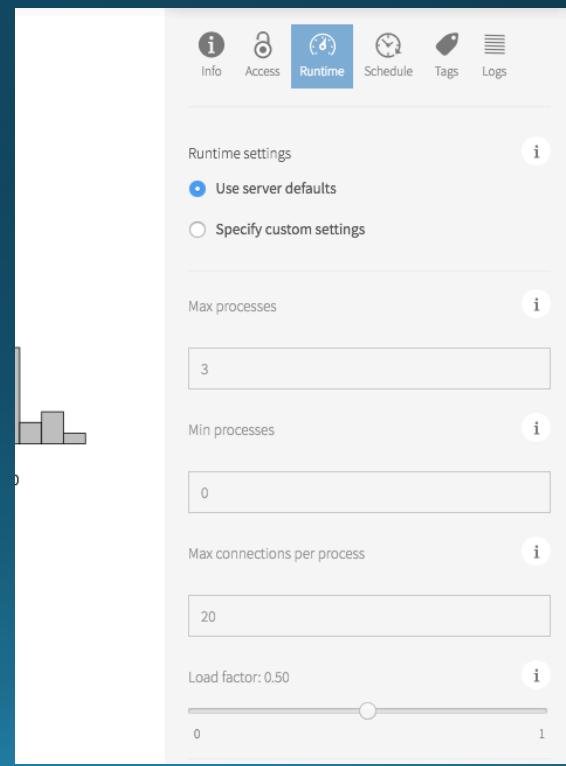


Publishing: Connect



Scaling: Utilization Scheduler

- Max processes
- Min processes
- Maximum connections per R process
- Load factor



Questions?



Resources

<https://support.rstudio.com/hc/en-us/articles/115000171848-Why-are-my-Shiny-apps-are-running-slowly->

<https://support.rstudio.com/hc/en-us/articles/220546267-Scaling-and-Performance-Tuning-Applications-in-Shiny-Server-Pro>

<https://support.rstudio.com/hc/en-us/articles/231874748-Scaling-and-Performance-Tuning-in-RStudio-Connect>

<https://www.r-bloggers.com/strategies-to-speedup-r-code/>

<https://rstudio.github.io/profvis/>