Simple shiny app: power0

true

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Introduction

Consider an app that is a balance of simple and functional – one that calculates the power for a 2-sample t-test as a function of the standardized effect size. Here is our shiny app `power0.R`:

```
ui <- fluidPage(
titlePanel("Power Calculator for Two Group Parallel Designs"),
sliderInput("N", "Total Sample Size:", min = 0, max = 300, value = 100),
plotOutput("plot"),
verbatimTextOutput("eff"))

server <- function(input, output, session) {
  delta = seq(0, 1.5,.05)
  pow = reactive(sapply(delta, function(x) power.t.test(input$N, d=x)$power ))
  eff =  renderText(power.t.test(input$N, power=.8)$d)
  output$plot <- renderPlot({
  plot(delta, pow(), cex=1.5, ylab="power")
  abline(h = .8,  col = "red", lwd =2.5, lty = 4)
  abline(v = eff(), col = "blue",lwd =2.5, lty = 4)})
  output$eff <- renderText(
    paste0("Std. effect detectable with power 80% = ", eff()) )
}
shinyApp(ui, server)
```

In most cases data scientists will develop their shiny apps 'locally' on their personal laptops or desktops, but the coding could also be done directly on the server. Wherever you're working you just need to have R and shiny (and any required R libraries) installed.

`APPS/app3> Rscript -e "runApp("myapp.R",launch.browser=T)".`