Interactive Visualization

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01/05/2020

In this course, the goal is to get people who already have some familiarity with R to the point where they can make, troubleshoot and deploy their own interactive visualizations to share with the world. Interactive visualization takes many different forms - from plotly charts to full-blown shiny applications that leverage complicated analytical frameworks in R. We will speak to the whole range of interactivity in this course.

Here is a brief list of topics and the proposed timing for their discussion. This is an entirely new course for me, so I have no experience to guide me on whether these are reasonable or not, so some reconfiguration might be necessary depending on the speed with which we’re able to cover all of these topics. The timing of the course will be as follows:

- Morning sessions will start at 9:30 AM Eastern Time. There will typically be a short break around 11:00.
- We will break for lunch at 1 PM for one hour.
- Afternoon sessions will start at 2:00 PM Eastern Time. There will typically be a short break around 3:45 and we will end the afternoon session around 5:30 PM Eastern time.

May 27:
- Morning: Interactive Visualization with plot_ly and ggplotly
  - Reading: Chapters 1-14 of Carson Sievert’s Interactive Web-based Data Visualization with R, plotly and shiny
- Afternoon: Writing R functions, Our first shiny app.
  - Reading: Chapters 5-6 of Hadley Wickham’s Advanced R and Chapters 1-2 of Hadley Wickham’s Mastering Shiny

May 28:
- Morning: shiny inputs and outputs.
  - Reading: Chapters 3-12 of Hadley Wickham’s Mastering Shiny
- Afternoon: Designing the UI, including reactive elements and Shiny modules.
  - Reading: Chapters 13-22 of Hadley Wickham’s Mastering Shiny

May 29:
- Morning: Building an R package around you shiny app.
  - Reading: Chapters 1-14 of Colin Fay et al’s Engineering Production-Grade Shiny Apps
- Afternoon: Wrap-up with questions and some applied problems.

The course will for certain have some interactive online lectures and some live lab experiences where I give you some time to test drive some of the things we’ve been talking about. The syllabus is pretty ambitious and we will get through as much of it as we can. I am also going to encourage everyone who wants to set up an individual meeting with me in the week or two following the course so we can talk about how to best implement what you’ve learned in the course for your own projects.