Keeping the Bootcamp Fun Alive!

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In the later part of 2013, I started the process of co-hosting a Bootcamp with Peter August, Judith Swift both from the University of Rhode Island (URI). During our discussions it became quite clear that as fantastic as the bootcamps are, it would be even better if we could extend the opportunities for learning. We tossed around several ideas but eventually decided we would try a special topics course at URI. Thus, Scientific Computing and Programming for Coastal Resource Managment was born. We opened the course up to any of the bootcamp participants who had an interest and official enrollment in the course was not required. In the end we had about 10 regulars attend the classes and a few students who enrolled for credit. Pete August, myself, and Adam Smith coordinated the course.

The content of the course was mostly coordinated by the students, with some classes led by myself, Adam, or Pete. Since the content was largely up to the interests of the class, we did need a way to reinforce the lessons taught in the bootcamp. To do this, we used blog posts, written in R Markdown, and turned in via Pull Requests as the mechanism for adding content to the course and reinforcing some of the version control lessons. In the end, the course covered material from spatial data handling in R, to image processing in R, to pivot table like operations in R, to extracting zip codes from messy data.

While this first run of the course was certainly experimental (and somewhat improvisational), the students indicated that it was helpful to have the extended exposure to R and computing. Some of the specifics we learned:

1. Don't limit yourself to enrolled students: Many of the participants in the course were not officially enrolled. In spite of this, they all were active members of the course, and contributed blog posts and presentations. This had the added benefit of having students with a breadth of experience and backgrounds.

2. Excercises are key: As this was our first go at this, we were feeling our way along and most of the posts and presentations did not have associated hands-on exercises. All of the students we talked to indicated that having more hands-on exercises would benefit the course.

So, given that the experience was a positive one we fully intend to offer this course again. We plan to do it as part of a sequence with an initial bootcamp – perhaps a Data Carpentry bootcamp – followed by the course. This additional opportunity helps keep the bootcamp experience and learning going and gives the students some directed guidance on how they can apply what they learned in the bootcamp to some of their own research questions.