TABLEAU ASSIGNMENT

In this assignment, you will use Tableau to create a series of visualizations and use them to explore a dataset.

While statistical programming environments such as R, MATLAB, Python (with appropriate llibraries such as matplotlib), Octave, SAS, and SPSS offer extensive visualization capabilities and offer some support for interactivity, they were originally designed to provide maximum control in producing publication-quality static images. In contrast, as a data scientist, you will often be performing *exploratory visual analytics* -- using visualization not as a presentation tool, but as an analysis tool.

Moreover, you will often be asked to produce *interactive data products* -- for example, dashboards -- that your stakeholders can use to answer their own questions.

In these scenarios, many find that Tableau and other visual analytics tools can dramatically improve productivity relative to low-level programming environments where details must be coded by hand.

For the purposes of this class, Tableau offers another benefit in that it is relatively easy to get started using regardless of your background, allowing you to spend more time considering the visualization principles being employed and less time wrestling with code.

The learning objectives for this assignment are to gain experience with Tableau, gain experience using visualization for data exploration, and gain experience using interactive visualizations to tell a story.

The assignment will be graded by peer review.

Tableau is also a lot of fun -- you can create some pretty sophisticated interactive visualizations in just a few seconds.

Instructions

1. Go to the Tableau for Teaching Download Link, fill out the form on the right hand side of the page, and download your copy of Tableau. If you are a student, under "Job Title", mark Student, and under "Organization", please input the name of your school. If you do not have access to a Windows machine, you will need to setup Tableau on a free windows AWS instance to complete the assignment. Note that performance will be slower using Tableau over the network, but it was quite usable in our tests.

UPDATE from a student: MS also offers pre-configured VMs for Windows XP through 8, in VMWare, VirtualBox and Parallels here: http://www.modern.ie/en-us/virtualization-tools#downloads (they even include curl instructions). These are trial versions, intended for testing Internet Explorer, but the default 'IEUser' account is an admin, so there shouldn't be an issue installing software. More details (including admin pw) here: http://virtualization.modern.ie/vhd/virtualmachine_instructions.pdf?v=1.1

UPDATE: There is an evaluation version of Windows 8 offered which can be run in Virtual Box. Mac users can get a trial version of Windows 7 as a VMWare virtual machine. There may be other solutions of the form "run a trial version of Windows in a VM."

2. Open Tableau, and enter the product key

3. Download the Tableau assignment workbook.

4. Open the sheet titled "Start Here" and read the instructions

5. There are 7 tasks, each associated with one or more sheets in the workbook.

6. Follow the instructions for each sheet. Typically this involves recreating a visualization you are provided.

7. If you need help, consult the documentation

8. For the last task, you will be asked to publish your workbook to Tableau Public. Save the url of your published workbook and enter it as the answer to the question below. Your peer reviewers will use the public version to assess your solution.

UPDATE: the instructions for uploading your workbook to Tableau Public were oversimplified. Please follow these instructions:

1) Upload the workbook
2) "show sheets as tabs" is critical to select...it can also be found by:
2a) Drop Down box under your User Name
2b) Select "User Preferences"
2c) Select workbook you uploaded
2d) Setting check "Show Sheets as tabs" (this part is absolutely critical)
3) Submit the URL for one single view in your workbook.
4) Reviewers will look for the tabs along the top row for additional views

Enter the URL of your published workbook.

http://public.tableausoftware.com/views/BirdStrikesAssignment-Jun24_13/1_Instructions?:embed=y&:display_count=no

I renamed the sheet titled "6. Custom Dashboard" to reflect the title of the dashboard: "Weather Conditions Affecting Bird Strikes"
It uses the sheets - "Sky Conditions", "Precipitation", and "Time of Day".