

CDS 301/501 - Homework 1

Due Date

4:30pm, Monday February 3rd, 2020

You will complete the survey online, and you will submit a single .pdf file to Blackboard that contains your answers to problems 2, 3 and 4.

Problem 1

Complete the survey at: <https://forms.gle/uofLf7KVm1Erzkph9>

Problem 2

Interpret the visualization of exoplanet data below. Specifically, consider what variables are mapped and how they are encoded. Describe the type of each axis and describe the use of color and symbols in your description.

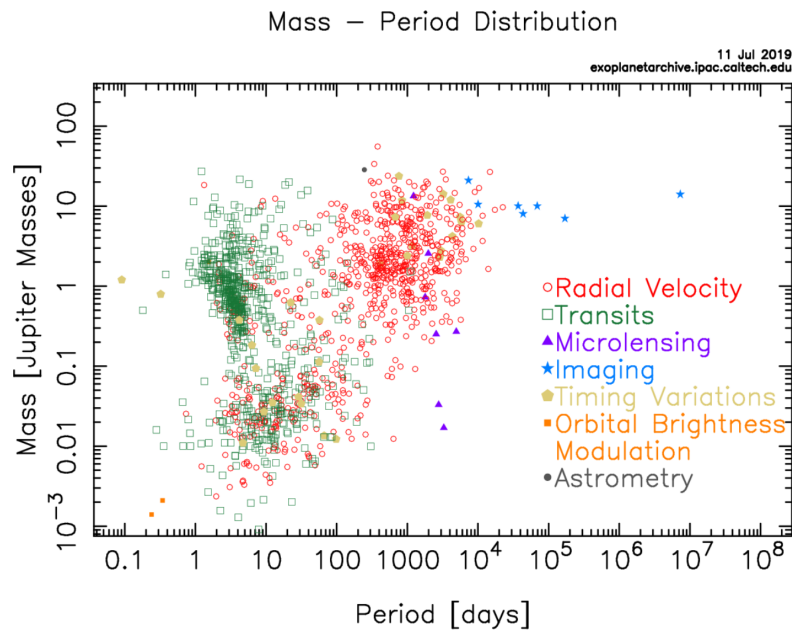


Figure 1: Exoplanet Data - Snapshot from July 2019

Problem 3

Using the dataset provided (exoplanet-0.csv), use Tableau to build the visualization from Problem 2. **Note:** You will not be able to mimic all aspects of this figure - just build an approximate Tableau equivalent visualization.

For this example, the default color palette selected by Tableau will not be optimal - spend some time trying to improve it by editing the color palette used. Similarly - spend some time trying to match the symbols used in the original. You don't need to go overboard here matching the original - just spend some time exploring how you change things in Tableau if you don't like the defaults.

Once you have a reasonable Tableau version of the original, use Tableau's annotation feature to add Earth to the graphic. For this you need Earth's mass and orbital period - which are given here: Earth has a Jupiter mass of about 0.003 and an orbital period of 365 days.

Problem 4

Consider a topic you are interested in investigating for your term project and briefly describe it in a few sentences (no more than a paragraph or two). Research and list 2 to 3 possible data sources that might be useful for your investigation (provide a name and a url for each data source). For one of those data sources, download the data (or portion of the data) and using Tableau, create a graphic. For this assignment - your graphic can be of any type and a simple graphic is fine. Describe the data set attributes you chose to visualize and briefly describe the mapping of the variables to the aesthetics you used in the graphic. Check that your axes are labeled, you have a title, and any necessary legends are present so that the graphic can be quickly understood.

Note: Since you may be new to Tableau, if you find the "building a graphic" portion Problem 4 difficult, you may substitute a graphic you find online, just copy and paste it into your .pdf, but still go through the steps of describing the graphic in terms of its encodings (i.e. what variables are getting mapped to what aesthetics).

Be prepared to discuss/present your ideas for a project in class for week 2.