

**A Virtual Bootcamp for Astronomy Graduate Students** 

# **SESSION 3 EXERCISES**

### **Exercise 1**

- 1. Create a directory with a couple of new python files.
- 2. Initialize a git repository within the directory
- 3. Make changes to the files and commit them to your repository
- 4. Make a new branch and commit a new change to your python files
- 5. Merge the new branch down to the main branch
- 6. Check out the git log to see all your commits

#### Exercise 2

- 1. Create a new uninitialized git repository on GitHub
- Push your repository to the new repository
- 3. Clone the remote repo to a new folder
- 4. Create a conflict: make changes to both the old and new repository
- 5. Fix the conflict and push everything back to the remote

### Exercise 3

#### Teams of 2-3

- 1. One member of the team should fork the exercise repository (<a href="https://github.com/starfishschool/repo\_for\_session3\_exercise">https://github.com/starfishschool/repo\_for\_session3\_exercise</a>) and give the other team member access to the repository.
- 2. Each of the members should clone the repository and edit a file called "load\_data.py"
- 3. In the file, everyone should create a function that produces the Fibonacci sequence to a certain input number, and commit it to their local repository
- 4. Push your changes to the remote repository, and deal with the conflicts.
- 5. Edit the file named "readme.md" with your description of the repository and push to GitHub

## **Exercise 4**

- 1. Create a new folder called "TestProject"
- 2. Open R Studio and start a new R Project within this folder
- 3. Make an R script with a function, or a few commands, etc. (whatever you like!)
- 4. Save the R script and add it to the git repository
- 5. Commit the file.
- 6. Make a change to the R script, and then look at the difference between the changes and the previous commit.