

# Version control with GitHub practice

Experiential Data science for Undergraduate Cross-disciplinary Education

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## Version control with GitHub practice

These problems are designed to help you practice concepts and functions covered in the ‘Version control with GitHub tutorial’.

*To complete all exercises, please complete the steps in the ‘GitHub tutorial’ and find a partner to work with.*

## Learning objectives

- Practice Unix command line
- Share and modify a version controlled file using GitHub

## Practice

1. Create and use a GitHub repo
    - Find a directory on your computer that you wish to version control and share on GitHub. Initialize it as a repo, add/commit files within the repo, and link it to your GitHub.
    - Make changes in one or more files on your computer and push to your GitHub.
      - Which types of files can you easily see changes in? Which types is it difficult to see specific changes in? Think about how well-crafted commit messages may help with this issue!
    - Make changes in one or more files through GitHub online.
      - How do you bring these changes to your local repo?
      - If you decide you prefer the version on your local computer, how would you force GitHub back to this version?
  2. Collaborate on GitHub
    - This exercise simulates what it would be like to collaborate on the same repo with another person.
    - In pairs:
      1. UserA: Use `git clone` to copy the `TestRepo` from UserB.
      2. UserB: Make a change to `README.md` in your local repo on your own computer and **push** that change to your GitHub.
      3. UserA: Update your copy of UserB’s repo.
      4. Switch roles!
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