15.S60: Computing for Optimization and Statistics
Assignment 1
Due: January 17, 2023 11:59pm EST

For this assignment, you will explore one use of Git, Github, and terminal in more depth.

Part 1: Connect Git and Github with SSH

To use git/terminal to push changes to Github, you need to tell git/terminal who you are and authenticate your Github credentials. We do that by connecting over HTTPS or with a SSH (Secure SHell) key. Follow instructions here in the "Authenticating with GitHub from Git" section to set up the connection.

Part 2: Creating a personal website via Github Pages

GitHub Pages is a static site hosting service that takes HTML, CSS, and JavaScript files straight from a repository on GitHub and publishes a website, automatically updating when there are new commits. Each Github user can host one personal website. In this assignment, you will build and deploy a personal website from an academic website template called Academic Pages (example site), all while practicing skills from Session 1. Once you've completed the assignment, you can complete your personal website by customizing the Academic Pages template with your info, finding a different template for your site, or building your own from scratch.

1. Fork the Academic Pages Github. Name your forked repo `yourgithubusername.github.io` (for example, `alexschmid3.github.io`). This will become the URL of your website. Following this exact naming scheme is crucial. If your repo is named anything other than this, it will not be published by Github. If you already have a site hosted by Github pages at that domain, then you can either create a new Github account to complete the homework or you can follow the instructions in the **Creating a Project Website** section below.

2. Your site will go live once you make a Github commit, triggering the Github Pages deployment process. In steps 3-6, we will make changes to your website by cloning to a local repo, editing locally, and pushing to Github. But if you want a sneak preview of your site before you edit anything, click the `README.md` file in the Github repo, click the pencil icon to edit, make a small change like adding a space, then scroll to the bottom and click "Commit changes". In a few minutes, your site template should be live at `https://yourgithubusername.github.io`. If your site is not live, you can check on the site deployment process by navigating to the Actions tab of your repository and clicking on the "Pages build and deployment" workflow. Click "Re-run all jobs" to try deployment again.

3. Open Terminal or Git Bash. Clone your forked repo to your local machine into the directory of your choice.

4. Make at least three commits to your cloned repo to make the website your own. For example, you could:

   - Change your name, location, and sidebar links in `_config.yml`
   - Upload a profile picture to `images` folder and change `avatar` to the image file name in `_config.yml`
   - Add some text to your home page in `_pages/aboutme.md`
   - Change the pages displayed in the navigation bar by editing `_data/navigation.yaml`
   - Upload your resume or CV as a PDF to the `files` folder. Add a link to the PDF in the navigation bar by editing `_data/navigation.yaml` and changing the URL for the CV page to `/files/filename.pdf`

   You don't need to finish editing your website as part of this homework. The goal is just to get some practice with Git and Github and get you started with a personal website if you would like one.

5. **Take a screenshot of your commit history** that shows at least three commits.

6. Push your changes to Github. The remote connection should already be set up since you cloned the repo. To complete this step, you must have completed the SSH key set up from the beginning of this assignment.

7. Go to `https://yourgithubusername.github.io`. It may take 5-10 minutes for changes you pushed to be published. **Take a screenshot of your site** with your name at the top. It's fine if most of your site is still generic text and the default format.

8. Submit the two screenshots to Canvas (commit history and live website) as a single PDF.

9. At this time, you can either leave your site live or unpublish it. To unpublish, navigate to the Settings tab of your repo and click Pages in the left sidebar. At the top where it says "Your site is live at", click the three dots icon on the right and select "Unpublish site". If you finish editing your site later and want to re-publish it, navigate to the Actions tab of your repository, click on the "Pages build and deployment" workflow, then click the "Re-run all jobs" button in the upper right corner of the page. After the workflow run has completed, your site will be published.

Questions

If you have any questions, email Alex at aschmid@mit.edu.

Creating a Project Website

If you are already using your Github Pages personal domain (`https://⟨githubusername⟩.github.io`) for another purpose, then you can alternatively fork the Academic Pages template and create a **project** website for it.

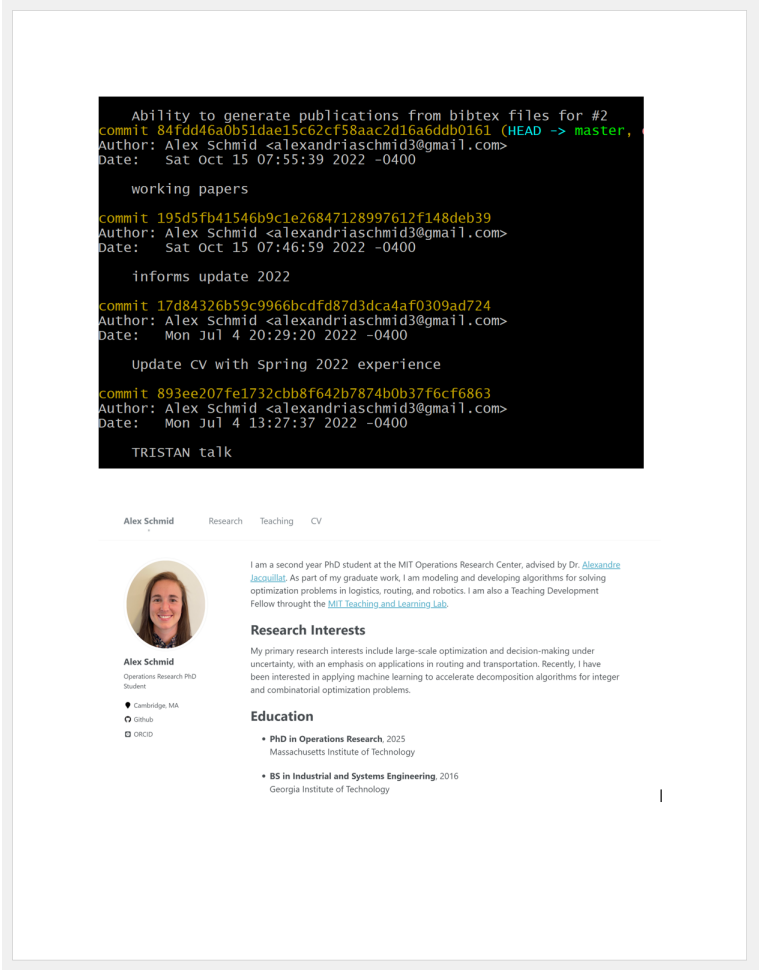
1. Fork the Academic Pages Github repo and give it any name you like

2. Go to the setting of this repository in Github

3. Click "Pages" in the left sidebar and be sure that the "Source" dropdown says "Deploy from a branch". Use the "Branch" drop down to select `master` or `main` branch

4. In a few minutes, your new project site will be available at `⟨githubusername⟩.github.io/reponame`. If your site is not live, you can check on or re-run the site deployment workflow by navigating to the Actions tab of your repository and clicking on the "Pages build and deployment" workflow.

Example Submission



```
    Ability to generate publications from bibtex files for #2
commit 84fdd46a0b51dae15c62cf58aac2d16a6ddb0161 (HEAD -> master,
Author: Alex Schmid <alexandriaschmid3@gmail.com>
Date:   Sat Oct 15 07:55:39 2022 -0400

    working papers

commit 195d5fb41546b9c1e26847128997612f148deb39
Author: Alex Schmid <alexandriaschmid3@gmail.com>
Date:   Sat Oct 15 07:46:59 2022 -0400

    informs update 2022

commit 17d84326b59c9966bcdfd87d3dca4af0309ad724
Author: Alex Schmid <alexandriaschmid3@gmail.com>
Date:   Mon Jul 4 20:29:20 2022 -0400

    Update CV with Spring 2022 experience

commit 893ee207fe1732cbb8f642b7874b0b37f6cf6863
Author: Alex Schmid <alexandriaschmid3@gmail.com>
Date:   Mon Jul 4 13:27:37 2022 -0400

    TRISTAN talk
```