

98-174: Modern Version Control with Git

Spring 2018

Lectures

Thursdays 6:30pm - 7:20pm
Hunt Library Cluster

Instructors

Aaron Perley (aperley@andrew.cmu.edu)
Ilan Biala (ibiala@andrew.cmu.edu)

Units: 3

Course Description

This course offers an introduction to version control by teaching you how to use Git, a very popular version control system. We will focus on the basics of using Git for your own projects and projects with other developers using platforms like GitHub and Bitbucket. Upon completion of this course, students will feel comfortable using Git as a version control tool and know where to find resources for advanced Git usage.

No prior Git or programming experience is required. As we will be using Git from the command line, we will provide an introduction to basic command line usage.

Learning Objectives

Upon completion of this course students will be able to:

- articulate the purpose of a version control system.
- use Git effectively to track changes in small personal projects.
- collaborate with other Git users using cloud-based Git hosting.
- find resources and documentation for Git commands and usage.

Required Materials

- A laptop is nice to have, but not required.
- A recommended supplemental resource is the freely available Pro Git book by Scott Chacon and Ben Straub (<https://git-scm.com/book/en/v2>).

Course Schedule

1. What is a version control system?
2. Adding files and making commits
3. Reviewing commits
4. Using branches

5. Merging
6. Working with remotes
7. Collaborative workflows
8. Rebasing
9. The stash
10. Reverting
11. Searching history
12. Visual Git tools
13. Plumbing and porcelain

Course Policy

Attendance: Lectures are mandatory by StuCo policy. If you are absent from more than two lectures without an excuse, then you automatically fail this course. As lectures are only 50 minutes long, being late by more than 15 minutes counts as an absence. If you have a reasonable excuse for missing or being late to lecture, you must contact the instructor before lecture to be excused. You are expected to participate in discussions and activities during lectures. The use of mobile devices is not allowed during lecture, unless their use is part of an activity.

Recording: No audio or video recordings may be made of the class without the explicit prior permission of the instructor.

Office Hours: This course currently has no Piazza or scheduled office hours. You should email the instructor if you have questions about the material or the homework, or if you think the course would benefit from a Piazza or scheduled office hours.

Academic Integrity & Collaboration: Academic integrity policies apply to this course. Discussion of homework and activity problems with other students is allowed, but students should write up their own solutions individually. Discussion is not allowed during the in-class midterm and final exams.

Late and Make-Up Work: Late assignments will not be accepted, except in the case of instructor-granted extensions. Please email the instructors before the assignment deadline if you think you need an extension.

Grading: This course is Pass/No Credit. You must get at least 70% to pass. Grades are assigned according to the following weights:

Attendance: 20%

Homework: 30%

Midterm: 20%

Final: 30%

Accommodations for Students with Disabilities: If you have a disability and require accommodations, please contact Catherine Getchell, Director of Disability Resources, 412-268-6121, getchell@cmu.edu.

Student Wellness:

Take care of yourself. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help: call 412-268-2922 and visit their website at <http://www.cmu.edu/counseling/>. Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help.

If you or someone you know is feeling suicidal or in danger of self-harm, call someone immediately, day or night:

CaPS: 412-268-2922

Re:solve Crisis Network: 888-796-8226

If the situation is life threatening, call the police:

On campus: CMU Police: 412-268-2323

Off campus: 911

If you have questions about this or your coursework, please let us know.