

# CSCI 3294 (Seminar: UNIX Power Tools), Fall 2018

## Guidelines and Requirements for Projects

### 1 Overview

One of the requirements for this course is completion of a project. You may work individually or with one other person in the class. (With so few students I would prefer individual projects, but I'll consider two-person projects as well.) The project will count as 50 points of your total grade. Level of effort should be more than any of the assignments, but comparably so based on number of points — i.e., a little more than twice as ambitious as a 20-point homework — and if two people work together, the project should be about twice as ambitious as a solo project. All projects must be approved in advance, and I'll be the final arbiter of whether the topic and level of difficulty are appropriate. I'm willing to consider any topic that (1) uses something we talked about in class, or something related, and (2) I can reasonably supervise and grade.

### 2 Suggestions for topics

The goal of this assignment is to give you a chance to go beyond what we did in class and in homework — explore a topic we didn't address, learn more about a topic you found particularly interesting, figure out how to use UNIX tools to solve a problem of interest to you, etc. You will probably (but not necessarily) end up with one or more of the following as “deliverables”.

- Shell script(s).
- Makefile(s).
- Configuration file(s) (for `bash` or `vim` or other programs).
- `awk` program(s).
- `LATEX` macro(s).

Student projects in previous years have included the following.

- An engine for text adventure games (shell scripting).
- Shell scripts to generate form letters using `LATEX`.
- A comparison of GNU versions of some UNIX tools to their “true UNIX” counterparts.
- Shell scripts to collect performance data for a set of programs and plot it with `gnuplot`.
- Shell scripts to generate a skeleton for a Java class, something like what Eclipse does.
- `vim` macros for commenting out code in a variety of languages.
- Shell scripts to reorganize files in a directory, creating subdirectories based on timestamps.
- A multi-person chat program implemented with shell scripts.

If nothing occurs to you right away, try to think of a task you do, or would like to do, that's in some way automatable, and/or come talk to me.

### 3 What to turn in

- *Project proposal* (5 points). A brief description of your project topic, no more than a paragraph. Submit by e-mail. Due date as specified on the course “lecture topics and assignments” page.
- *Project report and deliverables* (30 points). Due the date and time scheduled for the course final. A reasonably detailed description of what you did, problems you encountered, things you learned, etc., plus your “deliverables” (scripts, configuration files, etc.). Turn in the report in hardcopy form; submit anything machine-testable via e-mail, as for the homeworks.
- *Project presentation* (15 points). Due the date and time scheduled for the course final. A brief presentation (no more than 10 minutes) describing your project’s goals and outcome. It should address the same topics as your written report, in as much detail as is reasonable for the time you have and the audience (your classmates), and should probably include a demo if appropriate.