

Bioinformatics Computing
Dr. Scott Emrich

Semester Programming Project Information

The semester project in this course is to be performed in groups of size 2 – 3 people. Expectations will be adjusted slightly based on team size.

For this course project, you will be asked to develop a program/pipeline/framework that performs an interesting and nontrivial bioinformatics task using tools and skills developed in this course. Examples of such tasks might be EST clustering (butterfly project), SNP discovery (malaria), assembly (mosquito), validation, or any other interesting problem. Please don't be constrained by these examples; you are encouraged to use your creativity, make it awesome and most importantly have fun doing it.

Note that full credit will be given for “getting stuff done,” which may or may not include lots of programming. If you are able to adapt a previously developed approach for your problem this is fine, just make sure to acknowledge the source in your deliverables.

Requirements

1. Perform a modest bioinformatics project over the course of ~5 weeks with the approval of the instructor on the topic.
2. Give a 5-7 minute in-class presentation that includes one slide for each of the following aspects of your project (hint figures will help):
 - a.) Objective\Hypothesis\Idea
 - b.) Approach
 - c.) Methods
 - d.) Schedule: roughly how much effort went into each method?
 - e.) Future directions
3. Submit a 3-5 page “white paper” report, single-spaced, with a paragraph structured as your presentation but with a few paragraphs for each slide. Please include figures and tables where appropriate, and use the paper as a way to provide a more in-depth summary of the technical details of your project.

Deliverables and grading

- (30 points); 12/11: project presentation in-class
- (60 points); 12/13: Final “white papers” due via email to Professor Emrich.
- (10 points); 12/15: Group member individual reports due via email to Professor Emrich. Each team member should describe their contribution to the project and briefly assess the performance of each of the team members.