

## Final project

The final project should be a 10 page (or less) paper (not including tables, figures and references) which is either a constructive and critical review of some computational problem in computational molecular biology, genomics, bioinformatics, or alternatively, a proposal for a new approach to a computational problem or third, an actual implementation of some new method.

Each lecture is often a critical review of some topic. You may chose to do a final paper on one of the lecture areas but only if you go into more depth and cover additional, more recent work in that area. You may also critically review one of the many areas that I do not cover in class. About halfway through the course I will ask you to send me your ideas on your final paper and we will discuss it via email.

Many biologists in the course often wish to write about a biological problem instead of a computational problem. This will generally not be acceptable for the final project, but such an approach can easily be converted to a computational critique. For example you might be interested in the evolution or the function of some gene or protein family. You could attempt to build an evolutionary tree (phylogeny) of the family or some conserved motif in the family using several different methods discussed in the class or in the literature and point out the failure of some or all methods to give a biological meaningful result. Then you could describe why the existing methods fail and constructively describe a new approach that might work. Hence you would have converted your study of a biological problem into a computational issue in computational molecular biology!

Dec. 22

One paragraph description of what you want to do, ~100 words.

Dec. 29

The first draft of final project

January 5

Submit the final version