

Due: Monday, January 18.

This assignment is worth 10% of final grade

1. Write a two page critique of Chapters 3 and 4 of the Easley and Kleinberg text. In particular, what concepts, facts, etc did you find of particular interest? What material did you find easy or hard to understand? Did you find typos or places where the exposition is not well written? Are these chapters of the text appropriate for a SCI199 class in which most students do not have significant interest or academic preparation in mathematics and science? In particular, are these chapters appropriate for *you* given your academic background and interests?
2. Consider the following parts of two social networks based on your own personal friendships. In the first “offline network”, consider your set of personal friends *before* you joined facebook or whatever was your first online social network (assuming you have joined an online social network). In the second network, consider your set of facebook (or some other online social) network friends. If you have not joined facebook or any other online social network, then instead of answering questions pertaining to an online social network write a one page report on your opinion of facebook, as to its benefits and problems.
 - (a) In the offline network and in the online social network, estimate your clustering coefficient? Explain how you determined these estimates? Is there a significant difference in these clustering coefficients and if so, do you have an explanation for the difference?
 - (b) Choose some immutable (eg ethnicity) or mutable (eg membership in a club) characteristic and consider the offline network of just your friends (i.e. without you and without friends of friends, etc). Estimate (to the best of your knowledge about your friends) the calculated outcome of the homophily test based on this characteristic.