

CS410 Final Exam

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1. Consider building a network in the following way. Given n machines, insert an edge between any pair of machines with probability $p = c/n$ for some $c \leq n$. For what value of c is the expected number of edges $(n - 1)$? For this c , give the best upper bound you can on the probability that there are at least $2(n - 1)$ edges in the network.