



Figure 1: Scatter plot of grades on Homework 2. The x-axis is the total number of letters in the two bird names

Other comments — in no particular order

1. If you have a figure — it should:
  1. Be numbered
  2. Have an explanatory caption
  3. Be referred to in the text
2. If you have an item in your list of references, it should have a citation in the text
3. If you have a citation it should be as authoritative as possible. For instance, the Python manual rather than geeks for geeks
4. Use APA or MLS style references.
5. Code blocks of more than 4 lines should be in a numbered figure.
6. Rhetorical questions. Just don't. They are OK (ish) when speaking, not when writing.
7. Big O notation is NEVER about average case or best case. It is always about worst case. So phrases like "On average the algorithm is  $O(N*N)$ " should never appear.
8. Watch out for undefined terms — for instance several people described an algorithm as "more efficient" without defining efficiency.
9. Methodology — When writing up your methodology ask yourself could I reproduce my study from this description. If not, then you are not complete.
10. Many people had the statement "Quicksort is bad at small arrays". At the very least this is ill-defined. What is bad? What are "small arrays"? Worse, it is undefended. In what way is

it bad, what makes it bad? The easiest out here is to cite someone else who makes this claim.

11. Many of you followed my rubric fairly slavishly. This resulted in a choppy, odd-feeling sort of report. I will public a rubric this week, but it will be in completely random order.
12. Motivation / Introduction — take a paragraph and say why this is an interesting topic. There must be a reason I chose to have you look at it.
13. There was a lot of vigorous hand waving about why Hybrid was not  $N^2$ . A couple of people found relevant sentences from Cormen. Sometime you just have to do math. For instance, if the cutoff is size  $M$  and the array size is  $N$ , then some really fun math suggests that you could expect improvement from hybrid so long as  $M/4 < \lg(N) - \lg(M)$ . Math like this does not give you the “best”  $M$  but it at least gives the reader a feeling of solidity.
- 14.