



*Blocks 1-4 Cumulative Assessment
Part II.*

May 3, 2019
CS: DS&A
PROOF SCHOOL

For the second part of your exam, I'd like you to code up the magic median algorithm!

Write a function called `magic_median` that takes a list of integers and returns their median in linear time. Write up your code in a file called `final.py` and share it by Dropbox before 9:35:01 AM on Monday, May 6.

Some additional points:

- You may alter the input as desired.
- You may assume that the input does not contain any duplicates.
- Use as much extra memory as you need. But for extra credit, code your algorithm so that it takes $O(1)$ space. (Let me know if you think that you have done so.)

I'll be grading on style and clarity in addition to correctness. Turn in something you're proud of!

And have fun!!! This is the last assignment-y or exam-y thing we're going to do in computer science this year. After this, it's on to research projects, in whatever area interests you. Yay!