

Problem Set 1, Problems 0 and 1

Problem 0: Reading and response

Put your response to the reading below.

I really like the idea that we have so much data now that we don't need to make predictions, we can just see what is happening. I think it's really interesting and makes me curious about what the outcomes of this big data is gonna be in the future. I think this article is pretty current besides some dated references, but one of the biggest outdated things is that the supercomputers are new and "so big". Nowadays there are many more supercomputers that are a lot bigger. The biggest one has 8,000+ cpu's with 64 cores each and has a lot of gpus as well, which makes their supercomputer pale in comparison. Furthermore, I think the idea that models don't predict anything and it takes too much energy to do physics experiments anymore is outdated as well, nowadays the physics models predict the particles we find from experiments years before and the colliders only get more and more massive with more energy. I think that throwing away models entirely is a flawed idea, as getting massive amounts of data for everything is inefficient when a model can do the same in much less compute power, but I agree that the age of big data has allowed for a lot more pure statistics to do the work for us.

Problem 1: Boolean expressions and conditional execution

1-1. Boolean expressions

a) `y > (2 * x)`

b) `(x % 4) == 0`

c) `(y == 10) or (y == 11)`

1-3. Conditional execution: Calls to the function `mystery()`

function call	output
a. <code>mystery([3, 3, 3])</code>	cow how row
b. <code>mystery([3, 4, 5])</code>	cow bow row
c. <code>mystery([3, 5, 2])</code>	mow low pow row
d. <code>mystery([5, 4, 3])</code>	wow row
e. <code>mystery([3, 7, 5])</code>	low pow row
f. <code>mystery([8, 2, 2])</code>	tow row