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**CS152-B**

**Reaction paper**

### **Reflection on computational thinking from a philosophical standpoint**

The way we humans think of things is relatively different than how computer process information since our mind accounts for feelings, imagination, and past experiences. However, that being said, since humans are the mother of all technologies computational thinking is inherently human thinking. Following the paper critique, I do agree with the comparison between human and computational thinking. - The paper clearly outlined that computational thinking is not computational programming, "to be a computer scientist you need to think at multiple levels of abstractions."

We underestimate the similarity between human and computational thinking. Although we are of greater complexity than the computer, the computer can induce the desired outcome more clearly due to its resistance to outside distractions. Yet, humans always aimed to achieve true knowledge, which can only be achieved if it is possible to be achieved by thinking computationally. Computers rely on induction. For instance, if this is "True" this must be the outcome, and induction has been the main method philosophers used for centuries to prove their premises. Thinking like a computer is then comparable to thinking like a philosopher. If you were able to derive conclusions based on mathematical or logical relationships and exclude any irrelevant components such as feelings or biases, your conclusions will be further accurate, or solely correct if the premise used was correct. To think like a computer means to be incapable of accepting contradictions. For example, think of a computer being faced with a contradiction, like a list index outside of the list, it will give an error since it is impossible. However human minds are not like this, though we are capable of rational thinking, we choose to ignore them to justify our beliefs. Hence, we are more drawn to believe in two things that contradict each other or to believe subconsciously of things that lack any logical justifications, we also are more likely to follow the tribe, depending on confirmation or conviction biases, and any other false inducing thinking rationale. A computer on the other has to justify each premise, it cannot assume that  $i = 0$  if global  $i$  is 1 and there is no rational inductive step to switch  $i$  from 1 to 0.

That being said, thinking like a computer is less complex than thinking like a human, though it is less rational. However human lives never ought to be completely rational since our beliefs are based on common fiction (money, nations, etc...). Yet to learn to think like a computer is a process of reexamining all your beliefs and rely on solely the objective truth that you are cable of inductively proving.