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This paper by Alan Turing is probably the most commonly read paper in the field, and I am not at all surprised. This isn't just another description of how to run an algorithm or even another breaking theory in how to efficiently parallelize a process. This is paper on what it means to think, what it means to be human, and where machines fit into all this. Turing not only addresses the topic of the actual computation that the computer must do, but also the divide between humans and animals (touching on animal rights, maybe?), and then further between animate and inanimate objects. He also discusses the limits of computers and how they are scientifically limited in the speed and magnitude of calculations they are asymptotically able to perform. I really wonder what would have come of the paper if Turing were able to collaborate on the level of knowledge we have today. Would he have integrated the computer science with neuroscience? Would he be impressed with the Watson project or would he use it as evidence that we are still eons from creating a human equal?

Possibly the most interesting portion of the paper is his addressing the concept of emotion. Computers, as far as I am aware, do not feel emotion. But will we ever be able to properly instill emotion in a machine? Do we have benefits from that? Could we model emotion accurately? This last question is the topic of a great many more papers which I'm sure Alan Turing could contribute to greatly if we could live forever (only possible by the computers of the future).