Science of the Computer

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In an effort to retain the best knowledge and experiences of my years studying computer science at the University of Victoria and on my own, this compendium serves as an organized, concentrated volume of the most important concepts and practices that shaped my understanding of computer science and software engineering.

I am in no way able to claim ownership of the great research that many legendary and unsung computer scientists have undergone in order to arrive at our modern understanding of computing theory and their application in practical systems. The theories and ideas herein are neither mine nor complete - the internet is a fountain of free information for those that can access it. I've tried to take what I've read and write it in a way that I (and maybe we) can understand.

I believe education should be accessible to all who search for it. Hi, welcome to my classroom. I find myself aspiring to be a teacher, amongst many things. Unlike a classroom that can feel like a prison at times, you're free to close this document and rid yourself of my attempts at teaching. No hard feelings.

If you're totally new to this stuff, I recommend following the structure of the contents and referring to previous sections when necessary. My approach starts with foundational knowledge that is doable on pen and paper, then how modern computers work, and finally some practical applications. Have fun and keep learning!

- Oscar

Contents