Community Input for CS202X: Algorithms and Complexity

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For six decades, ACM and the broader computing community has established guidelines for Computer Science (CS) curricula. In Spring 2021, a CS202X Steering Committee was formed with the goal of establishing new curricular guidelines that will lead CS education for the next decade. As part of CS202X, an Algorithms (AL) subcommittee is focused on revising the AL topics and learning outcomes specified in Computer Science Curricula 2013. As the CS body of knowledge continues to grow, a healthy debate has emerged regarding how to prioritize the discipline’s expanding topics for potential inclusion in CS202X. Towards this end, the objective of this BoF session is to seek feedback from members of the SIGCSE community concerning the AL knowledge and competencies that should be included in the new CS202X guidelines. Possible discussions include: should all graduates know Turing Machines, the Halting Problem, Big-O Complexity, or be able to differentiate Divide-and-Conquer from Transform-and-Conquer strategies; should newer algorithmic approaches addressing bias, fairness, and privacy be included in the curriculum; what are we missing; and what is obsolete, and if we cannot include it all, what goes? The entire computing community must assist in deciding such questions and their answers. Attend this BoF and take pride in shaping the curricular guidelines of CS education for the next decade.

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