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Therefore, it behooves you to understand algorithms not just as a student or practitioner of computer science, but as a citizen of the world. Once you understand algorithms, you can educate others about what algorithms are, how they operate, and what their limitations are.

This book provides a comprehensive introduction to the modern study of computer algorithms. It presents many algorithms and covers them in considerable depth, yet makes their design accessible to all levels of readers.¹ All the analyses are laid out, some simple, some more involved. We have tried to keep explanations clear without sacrificing depth of coverage or mathematical rigor.

Each chapter presents an algorithm, a design technique, an application area, or a related topic. Algorithms are described in English and in a pseudocode designed to be readable by anyone who has done a little programming. The book contains 231 figures—many with multiple parts—illustrating how the algorithms work. Since we emphasize efficiency as a design criterion, we include careful analyses of the running times of the algorithms.

¹ To understand many of the ways in which algorithms influence our daily lives, see the book by Fry [162].