

AN INTRODUCTION TO BIOINFORMATICS ALGORITHMS

NEIL C. JONES AND PAVEL A. PEVZNER

This introductory text offers a clear exposition of the algorithmic principles driving advances in bioinformatics. Accessible to students in both biology and computer science, it strikes a unique balance between rigorous mathematics and practical techniques, emphasizing the ideas underlying algorithms rather than offering a collection of apparently unrelated problems.

The book introduces biological and algorithmic ideas together, linking issues in computer science to biology and thus capturing the interest of students in both subjects. It demonstrates that relatively few design techniques can be used to solve a large number of practical problems in biology, and presents this material intuitively.

An Introduction to Bioinformatics Algorithms is one of the first books on bioinformatics that can be used by students at an undergraduate level. It includes a dual table of contents, organized by algorithmic idea and biological topic; discussions of biologically relevant problems, including a detailed problem formulation and one or more solutions for each; and brief biographical sketches of leading figures in the field. These interesting vignettes offer students a glimpse of the inspirations and motivations for real work in bioinformatics, making the concepts presented in the text more concrete and the techniques more approachable.

PowerPoint presentations, practical bioinformatics problems, sample code, diagrams, demonstrations, and other materials can be found at <http://www.bioalgorithms.info/>.

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