Knowledge Discovery in Bioinformatics: Techniques, Methods, and Applications

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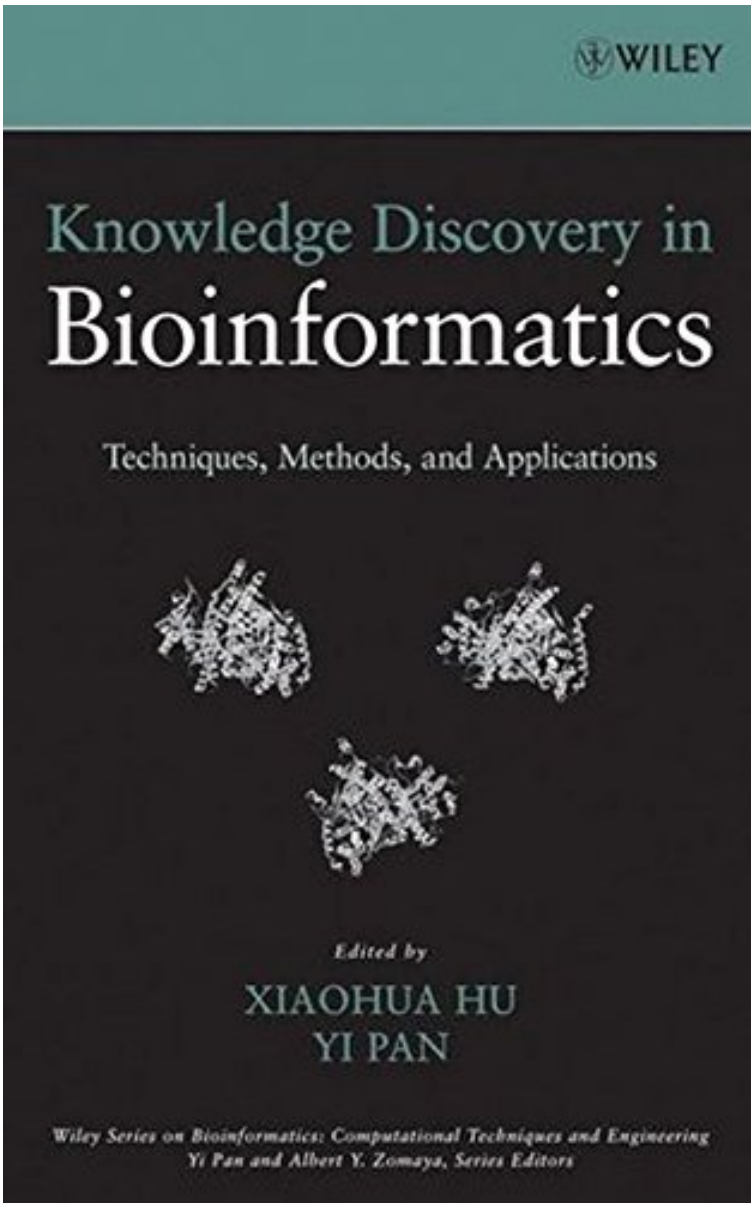

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Xiaohua Hu, Yi Pan : Knowledge Discovery in Bioinformatics: Techniques, Methods, and Applications before purchasing it in order to gage whether or not it would be worth my time, and all praised Knowledge Discovery in

Bioinformatics: Techniques, Methods, and Applications:

The purpose of this edited book is to bring together the ideas and findings of data mining researchers and bioinformaticians by discussing cutting-edge research topics such as, gene expressions, protein/RNA structure prediction, phylogenetics, sequence and structural motifs, genomics and proteomics, gene findings, drug design, RNAi and microRNA analysis, text mining in bioinformatics, modelling of biochemical pathways, biomedical ontologies, system biology and pathways, and biological database management.

"is an educational and interesting read and a reminder of just how much the worlds of statistics, biology, and computer science have melded." (Journal of the American Statistical Association, June 2008) "a worthwhile read for any bioinformatician and fulfills its stated object of presenting cutting-edge research topics." (IEEE Engineering in Medicine and Biology Magazine, January/February 2008) "...this book is essential reading for all researchers in bioinformatics." (Bioautomation, volume 7)From the Back CoverWiley Series on Bioinformatics: Computational Techniques and Engineering Discover how data mining is fueling new discoveries in bioinformatics As the field of bioinformatics continues to flourish, producing enormous amounts of new data, the need for sophisticated methods of data mining to better manage and extract meaning from bioinformatics data has grown tremendously. This pioneering text brings together an unparalleled group of leading experts in both data mining and bioinformatics. These experts present a broad range of novel methods, techniques, and applications of data mining for the analysis and management of bioinformatics data sets. Among the topics covered are: RNA and protein structure analysis DNA computing Sequence mapping and genome comparison Gene expression data mining Metabolic network modeling Phyloinformatics Biomedical literature data mining Biological data integration and searching For each topic, readers get an inside perspective into the latest researchwhat works and what doesn't and where additional research and development is needed. References to the primary literature facilitate further in-depth research. Data mining in bioinformatics holds the promise of solving such fundamental problems as protein structure, gene finding, data retrieval, and integration. This text is therefore essential reading for all researchers in bioinformatics, pointing them to new methods and techniques that may be the key to new and important discoveries.About the AuthorXiaohua Hu, PhD, is Assistant Professor of Computer Science in the College of Information Science and Technology at Drexel University. His research has been published in such journals as IEEE Computer, Knowledge and Information Systems, Journal of Intelligent Systems, and the International Journal of Applied Intelligence. Yi Pan, PhD, is Chair and Professor of Computer Science at Georgia State University. His pioneering work in computing using reconfigurable optical buses has been cited by researchers around the world. Dr. Pan is co-holder of three United States patents (pending) and five provisional patents.