This book is an excellent introductory text describing the use of bioinformatics to analyze genomic and post-genomic data. It has been translated from the original popular French edition, which was based on a course taught at the well-respected École Polytechnique in Palaiseau. This edition has been fully revised and updated by the authors.

After a brief introduction to gene structure and sequence determination, it describes the techniques used to identify genes, their protein-coding sequences and regulatory regions. The book discusses the methodology of comparative genomics, using information from different organisms to deduce information about unknown sequences. There is a comprehensive chapter on structure prediction, covering both RNA and protein. Finally, the book describes the complex networks of RNA and protein that exist within the cell and their interactions, ending with a discussion of the simulation approaches that can be used to model these networks.

Praise from the reviews:

“In context of the new developments the genomic era has brought, Bioinformatics: Genomics and Post-Genomics becomes a fundamental and indispensable resource for undergraduate and early graduate students... insightfully authored... will immensely help students... in establishing important foundations while shaping their careers.” NEWSLETTER, BRITISH SOCIETY OF CELL BIOLOGY
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Translated by Noah Hardy.

FEATURES

- This book provides a clear and concise introduction to the popular new science of bioinformatics

- Covers basic studies of the genome as well as more advanced post-genomic analysis

- Features both biological problems and concepts from informatics

- Translated from a successful French edition that was itself based on a course at the well-respected Ecole Polytechnique in Paris

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