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next-generation DNA sequencing (NGS) technology has revolutionized biomedical research, making complete genome sequencing an affordable and frequently used tool for a wide variety of research applications. Bioinformatics methods to support DNA sequencing have become a critical bottleneck for many researchers and organizations wishing to make use of NGS technology. This book provides a thorough introduction to the necessary informatics methods and tools for operating NGS instruments and analyzing NGS data. The book also provides extensive reference to best-practice bioinformatic methods for the most commonly used NGS technologies and applications. The book also includes reference to, and guidance on, the setup and use of essential software for NGS data analysis. This is the first book of its kind to address the informatics needs of scientists who wish to take advantage of the explosion of research opportunities offered by new DNA sequencing technologies.

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