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Nota di contenuto	Chapter 1. Introduction to Python -- Chapter 2. Python Basics -- Chapter 3. Working with Biomedical Data – Basic Data Handling -- Chapter 4. Biomedical Data Preprocessing -- Chapter 5. Basic Biomedical Data Exploration Techniques -- Chapter 6. Data Visualization in Biomedicine -- Chapter 7. Statistical Analysis in Biomedicine -- Chapter 8. Machine Learning in Biomedicine -- Chapter 9. Image Processing in Biomedical Research -- Chapter 10. Genomic Data Analysis -- Chapter 11. Pharmacokinetics and Pharmacodynamics Analysis -- Chapter 12. Natural Language Processing (NLP) Basics -- Chapter 13. Single-cell RNA Sequencing Data Analysis.
Sommario/riassunto	This introductory book is a beginner-friendly resource that empowers you to harness Python programming for exploring and understanding biomedical data. In today's data-driven world, the ability to analyze

and interpret complex datasets is a vital skill—especially in biomedicine, where data-driven insights can lead to groundbreaking advancements in health and medicine. Starting from scratch, this book introduces Python's fundamental syntax and guides you through its powerful applications in real-world biomedical research. Starting with the basics, this book offers a gentle introduction to Python's syntax and core concepts, making it accessible even if it is your first encounter with coding. You will discover that Python is more than just a tool—it becomes an essential partner in uncovering the stories within your data. Our primary aim is to equip you with a foundational understanding of Python, enabling you to run pre-written programs effectively and create simple pipelines for executing sequences of applications. You will engage with practical examples and exercises inspired by real-world biomedical scenarios, giving you realistic insights into the challenges and successes you may encounter in your data analysis tasks. Whether you are taking your first steps into data analysis or looking to expand your current skills, this introductory guide is ideal for graduate students, emerging researchers, and professionals in the biomedical field who are new to programming or Python. Python Essentials for Biomedical Data Analysis serves as a valuable and inspiring resource throughout your journey, unlocking the expansive potential of Python in biomedical research. .
