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Titolo	Human Microbiome : Techniques, Strategies, and Therapeutic Potential / / edited by Mohsin Khurshid, Muhammad Sajid Hamid Akash
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	981-9737-90-7
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (721 pages)
Disciplina	612.32
Soggetti	Medical microbiology Therapeutics Diseases Medical Microbiology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. An Introduction to the Human Microbiome -- Chapter 2. Host-microbiome Interactions -- Chapter 3. Techniques for Studying the Microbiome -- Chapter 4. Role of Computational Biology in Microbiome Research -- Chapter 5. The Epigenetic Impact of the Human Microbiota on Host Cells -- Chapter 6. Unraveling the Complexity of the Skin Microbiome: Advancing Research through Optimal Biological Models -- Chapter 7. Oral microbiome and its implication on systemic diseases -- Chapter 8. Microbiome and Reproductive Health -- Chapter 9. Microbiome and Neurological Disorders -- Chapter 10. Microbiome and Circadian Rhythms: Implications for Sleep, Aging and Therapeutic Strategies -- Chapter 11. Microbiome-Based Therapeutics in Immunological Disorders -- Chapter 12. Microbiome-based treatment for Gastrointestinal tract disorders -- Chapter 13. Microbiome-Targeted Therapies: Enhancing Resilience in Metabolic Disorders -- Chapter 14. Microbiome-Based Therapeutics for the Management of Cancer -- Chapter 15. Microbiome Based Therapies for Mental Health Disorders -- Chapter 16. Transforming Infection Treatment with Microbiome-Based Therapeutics -- Chapter 17. Microbiome-based formulations and products and their therapeutic implications -- Chapter 18. Strategies for modulating the gut microbiome -- Chapter 19. Modulating the Human Microbiome:

	The Impact of Xenobiotics on Gut Microbial Composition and Therapeutic Strategies -- Chapter 20. Building a Better Microbiome: Advances in Microbiome Engineering for Human Health -- Chapter 21. Regulatory considerations for Microbiome-based therapeutics -- Chapter 22. Microbiota-Based Therapeutics for COVID-19 and sequelae.
Sommario/riassunto	This book is a comprehensive guide on microbiome research, from the fundamentals of to the latest advancements in microbiome-based therapeutics. The initial chapters introduce the concept of the human microbiome delving into the intricate relationship between the human host and its microbiome. The chapter also examines the various tools and techniques used in microbiome research and the role of computational biology in analyzing vast amounts of microbiome data. The subsequent chapters review the role of the microbiome in various health conditions, including metabolic disorders, immunological disorders, gastrointestinal tract disorders, management of cancers, metabolic disorders, and mental health disorders. Towards the end, the book examines the regulatory considerations surrounding microbiome-based therapeutics, and ethical considerations surrounding microbiome-based therapeutics. This book is a comprehensive and cutting-edge guide for researchers, healthcare professionals, and students interested in the field of microbiome research and its potential for transforming healthcare.

2. Record Nr. UNINA9910847585803321

Autore	Jiang Meng
Titolo	Knowledge-augmented Methods for Natural Language Processing / / by Meng Jiang, Bill Yuchen Lin, Shuohang Wang, Yichong Xu, Wenhao Yu, Chenguang Zhu
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2024
ISBN	981-9707-47-1
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (101 pages)
Collana	SpringerBriefs in Computer Science, , 2191-5776
Altri autori (Persone)	LinBill Yuchen WangShuohang XuYichong YuWenhao ZhuChenguang
Disciplina	006.35 000
Soggetti	Natural language processing (Computer science) Computational linguistics Data mining Natural Language Processing (NLP) Computational Linguistics Data Mining and Knowledge Discovery
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1. Introduction to Knowledge-augmented NLP -- Chapter 2. Knowledge Sources -- Chapter 3. Knowledge-augmented Methods for Natural Language Understanding -- Chapter 4. Knowledge-augmented Methods for Natural Language Generation -- Chapter 5. Augmenting NLP Models with Commonsense Knowledge -- Chapter 6. Summary and Future Directions.
Sommario/riassunto	Over the last few years, natural language processing has seen remarkable progress due to the emergence of larger-scale models, better training techniques, and greater availability of data. Examples of these advancements include GPT-4, ChatGPT, and other pre-trained language models. These models are capable of characterizing linguistic

patterns and generating context-aware representations, resulting in high-quality output. However, these models rely solely on input-output pairs during training and, therefore, struggle to incorporate external world knowledge, such as named entities, their relations, common sense, and domain-specific content. Incorporating knowledge into the training and inference of language models is critical to their ability to represent language accurately. Additionally, knowledge is essential in achieving higher levels of intelligence that cannot be attained through statistical learning of input text patterns alone. In this book, we will review recent developments in the field of natural language processing, specifically focusing on the role of knowledge in language representation. We will examine how pre-trained language models like GPT-4 and ChatGPT are limited in their ability to capture external world knowledge and explore various approaches to incorporate knowledge into language models. Additionally, we will discuss the significance of knowledge in enabling higher levels of intelligence that go beyond statistical learning on input text patterns. Overall, this survey aims to provide insights into the importance of knowledge in natural language processing and highlight recent advances in this field.