

1. Record Nr.	UNINA9910988389203321
Autore	Vishwas Banglore Vijay Kumar
Titolo	Time series forecasting using generative AI : leveraging ai for precision forecasting / / Banglore Vijay Kumar Vishwas, Sri Ram Macharla
Pubbl/distr/stampa	New York : , : Apress, , [2025] ©2025
ISBN	9798868812767
Descrizione fisica	1 online resource (xvi, 215 pages) : illustrations
Disciplina	006.31
Soggetti	Time-series analysis - Data processing Artificial intelligence Forecasting - Data processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1: Time Series Meets Generative AI -- Chapter 2: Neural Network For Time Series -- Chapter 3: Transformers For Time Series -- Chapter 4: Time-LLM: Reprogramming Large Language Model -- Chapter 5: Chronos: Pretrained Probabilistic Time Series Model -- Chapter 6: TimeGPT: The First Foundation Model For Time Series -- Chapter 7: Moirai: A Time Series Foundation Model For Universal Forecasting -- Chapter 8: TimesFM: Decoder-Only Foundation Model For Time Series.
Sommario/riassunto	"Time Series Forecasting Using Generative AI introduces readers to Generative Artificial Intelligence (Gen AI) in time series analysis, offering an essential exploration of cutting-edge forecasting methodologies." The book covers a wide range of topics, starting with an overview of Generative AI, where readers gain insights into the history and fundamentals of Gen AI with a brief introduction to large language models. The subsequent chapter explains practical applications, guiding readers through the implementation of diverse neural network architectures for time series analysis such as Multi-Layer Perceptrons (MLP), WaveNet, Temporal Convolutional Network (TCN), Bidirectional Temporal Convolutional Network (BiTCN), Recurrent Neural Networks (RNN), Long Short-Term Memory (LSTM), Deep

AutoRegressive(DeepAR), and Neural Basis Expansion Analysis(NBEATS) using modern tools. Building on this foundation, the book introduces the power of Transformer architecture, exploring its variants such as Vanilla Transformers, Inverted Transformer (iTransformer), DLinear, NLinear, and Patch Time Series Transformer (PatchTST). Finally, The book delves into foundation models such as Time-LLM, Chronos, TimeGPT, Moirai, and TimesFM enabling readers to implement sophisticated forecasting models tailored to their specific needs. This book empowers readers with the knowledge and skills needed to leverage Gen AI for accurate and efficient time series forecasting. By providing a detailed exploration of advanced forecasting models and methodologies, this book enables practitioners to make informed decisions and drive business growth through data-driven insights. Understand the core history and applications of Gen AI and its potential to revolutionize time series forecasting. Learn to implement different neural network architectures such as MLP, WaveNet, TCN, BiTCN, RNN, LSTM, DeepAR, and NBEATS for time series forecasting. Discover the potential of Transformer architecture and its variants, such as Vanilla Transformers, iTransformer, DLinear, NLinear, and PatchTST, for time series forecasting. Explore complex foundation models like Time-LLM, Chronos, TimeGPT, Moirai, and TimesFM. Gain practical knowledge on how to apply Gen AI techniques to real-world time series forecasting challenges and make data-driven decisions.

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2. Record Nr.	UNINA9910349320803321
Titolo	Interdisciplinary Perspectives on Math Cognition // edited by Marcel Danesi
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2019
ISBN	3-030-22537-2
Edizione	[1st ed. 2019.]
Descrizione fisica	1 online resource (VIII, 344 p. 105 illus., 4 illus. in color.)
Collana	Mathematics in Mind, , 2522-5405
Disciplina	519
Soggetti	Neural networks (Computer science) Neurosciences Mathematics—Study and teaching Mathematical Models of Cognitive Processes and Neural Networks Mathematics Education
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	1. From Biological Brain to Mathematical Mind: The Long-Term Evolution of Mathematical Thinking (D. Tall) -- 2. Compression and Decompression in Mathematics (M. Turner) -- 3. How Technology Has Changed What It Means to Think Mathematically (K. Devlin) -- 4. Machine vs. Structure of Language Via Statistical Universals (K. Tanaka-Ishii) -- 5. Number Work: Recovering the Original Complexity of Learning Arithmetic (B. Davis) -- 6. The Body of/in Proof: An Embodied Analysis of Mathematical Reasoning (L. Edwards) -- 7. Math Puzzles and Learning Devices (M. Danesi) -- 8. Diagrams in Mathematics: On Visual Experience in Peirce (V. Kiryushchenko) -- 9. Laws of Form, Peirce and Cantor (L. Kauffman) -- 10. The Topology of Mathematics in the Mind and its Interaction with Verbal and Written Language (R.K. Logan, I.P. Oldenhoff) -- 11. Mathematical Fiction as an Interdisciplinary Source for Mathematics Courses: Resources and Recommendations (F. Nuessel) -- 12. Science, Magic, and the In-Between: Whence Logic (I. Semetsky) -- 13. Geometric Cognition (W. Whiteley) -- 14. Using Evidence to Close the Achievement Gap in Math (J. Mighton) -- 15. Knowledge Building, Mathematics and Creative Thinking: An Overview on Ontario Elementary Mathematical Teaching

Beyond 21st Century Skills (S. Costa) -- 16. Crypto-Mathematics in Ethnography: Estimation and Approximation via Ballparks and Eyeballing (M. Anderson) -- 17. A Mathematician, A Physicist and an Engineer: The Meaning of "M" in STEM (D. Martinovic) -- 18. Why a Duck? A Three-Part Essay on the Mathematics of Cognition (Y. Neuman) -- 19. On Mathematical Ways of Knowing: Ramblings of a Humanistic Mathematician (G. Karaali) -- 20. Epilogue: So What is Math Cognition? (M. Danesi).

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Sommario/riassunto

This is an anthology of contemporary studies from various disciplinary perspectives written by some of the world's most renowned experts in each of the areas of mathematics, neuroscience, psychology, linguistics, semiotics, education, and more. Its purpose is not to add merely to the accumulation of studies, but to show that math cognition is best approached from various disciplinary angles, with the goal of broadening the general understanding of mathematical cognition through the different theoretical threads that can be woven into an overall understanding. This volume will be of interest to mathematicians, cognitive scientists, educators of mathematics, philosophers of mathematics, semioticians, psychologists, linguists, anthropologists, and all other kinds of scholars who are interested in the nature, origin, and development of mathematical cognition. .

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