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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.