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	Nota di contenuto	PART I: Machine Learning for Forecasting -- Chapter 1: Models for Forecasting -- Chapter 2: Model Evaluation for Forecasting -- Chapter 3: Model Management and Benchmarking using MLflow -- PART II: Univariate Time Series Models -- Chapter 4: The AR model -- Chapter 5: The MA model -- Chapter 6: The ARMA model -- Chapter 7: The ARIMA model -- Chapter 8: The SARIMA model -- PART III: Multivariate Time Series Models -- Chapter 9: The SARIMAX model -- Chapter 10: The VAR model -- Chapter 11: The VARMAX model -- PART IV: Supervised Models -- Chapter 12: The Linear Regression -- Chapter 13: The Decision Tree Model -- Chapter 14: The kNN model -- Chapter 15: The Random Forest -- Chapter 16: Gradient Boosting with XGBoost, LightGBM, and CatBoost -- Chapter 17: Bayesian Models with pyBATS -- PART V: Neural Networks -- Chapter 18: Neural Networks -- Chapter 19: RNNs using SimpleRNN and GRU -- Chapter 20: LSTM RNNs -- PART VI: Black Box and Cloud Based Models -- Chapter 21: The NBEATS model with Darts -- Chapter 22: The Transformer model with Darts -- Chapter 23: The NeuralProphet model -- Chapter 24: The DeepAR model and AWS Sagemaker AI -- Chapter 25: Uber's Orbit Model -- Chapter 26: AutoML with Microsoft Azure -- Chapter 27: AutoML with Vertex AI on Google Cloud Platform -- Chapter 28: Nixtla Suite and TimeGPT -- Chapter 29: Model Selection.

Sommario/riassunto

Advanced Forecasting with Python, Second Edition, is a comprehensive and practical guide to mastering modern forecasting techniques using Python. Designed for data scientists, analysts, and machine learning practitioners, this updated edition bridges the gap between classical forecasting models and cutting-edge, AI-powered techniques that are reshaping the field. The book begins with foundational models like AR, MA, ARIMA, and SARIMA, offering intuitive and mathematical explanations alongside hands-on Python implementations. It then expands into multivariate models (VAR, VARMAX), supervised machine learning (Random Forests, XGBoost, LightGBM, CatBoost), and deep learning architectures such as LSTMs, NBEATS, and Transformers. Each chapter not only teaches the theory and code but also tracks model performance using MLflow, enabling efficient benchmarking and experimentation management. The second edition stands out for its extensive new content. Readers will now explore Orbit by Uber, AutoGluon by AWS, Prophet by Meta, Microsoft Azure AutoML, Google GCP AutoML, and TimeGPT by Nixtla, equipping them with the latest tools from top cloud providers. These additions make sure that readers stay current in an ever-evolving landscape. Moreover, the new chapters highlight practical deployment strategies and trade-offs between performance, explainability, and scalability. Whether you are just beginning your forecasting journey or seeking to enhance your expertise with state-of-the-art tools and cloud-based solutions, this book offers a rich, hands-on learning experience. With step-by-step Python examples, detailed model insights, and modern forecasting workflows, it is an indispensable resource for staying ahead in the realm of predictive analytics. You Will: < Build robust forecasting solutions using Python Gain both intuitive and mathematical insights into traditional and cutting-edge forecasting models Master model evaluation through cross-validation, backtesting, and MLflow-based tracking Leverage cloud-based platforms and Model-as-a-Service tools for scalable forecasting deployments.