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Applied Machine Learning and Deep Learning: Architectures and Techniques

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Preface

This book provides an extensive overview of recent advances in machine learning (ML) and deep learning (DL). It starts with a comprehensive introduction to the latest architectural and design practices, with an overview of basic techniques and optimization algorithms and methodologies that are fundamental to modern ML/DL development followed by the tools and frameworks that are driving innovation in ML/DL. The presentation then points to the central position of ML and DL in developing generative AI like ChatGPT. Then look at different industrial applications such as explaining the real-world impacts of each. This includes challenges around corroborate artificial Intelligence (AI), and trustworthy AI, and so on. Finally, the book presents a futuristic vision on the potentials and implications of future ML and DL architectures, making it an ideal guide for researchers, practitioners and industry professionals. This book will be a significant resource for comprehending present advancements, addressing encounter challenges, and traversing the ML and DL landscape in future, making it an indispensable reference for anyone interested in applying these technologies across sectors.

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