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Autore	Brasil Jorge
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Sommario/riassunto	Deepen your calculus foundation for AI and machine learning with essential concepts like derivatives, integrals, and multivariable calculus, all applied directly to neural networks and optimization.Key FeaturesA step-by-step guide to calculus concepts tailored for AI and machine learning applicationsClear explanations of advanced topics like Taylor Series, gradient descent, and backpropagationPractical insights connecting calculus principles directly to neural networks and data scienceBook DescriptionThis book takes readers on a structured journey through calculus fundamentals essential for AI. Starting with “Why Calculus?” it introduces key concepts like functions, limits, and derivatives, providing a solid foundation for understanding machine learning. As readers progress, they will encounter practical applications such as Taylor Series for curve fitting, gradient descent for optimization, and L'Hôpital’s Rule for managing undefined expressions. Each chapter builds up from core calculus to multidimensional topics, making complex ideas accessible and applicable to AI. The final chapters guide readers through multivariable calculus, including

advanced concepts like the gradient, Hessian, and backpropagation, crucial for neural networks. From optimizing models to understanding cost functions, this book equips readers with the calculus skills needed to confidently tackle AI challenges, offering insights that make complex calculus both manageable and deeply relevant to machine learning. What you will learnExplore the essentials of calculus for machine learningCalculate derivatives and apply them in optimization tasksAnalyze functions, limits, and continuity in data scienceApply Taylor Series for predictive curve modelingUse gradient descent for effective cost-minimizationImplement multivariable calculus in neural networksWho this book is for Aspiring AI engineers, machine learning students, and data scientists will find this book valuable for building a strong calculus foundation. A basic understanding of calculus is beneficial, but the book introduces essential concepts gradually for all levels.