Artificial Intelligence in Dentistry

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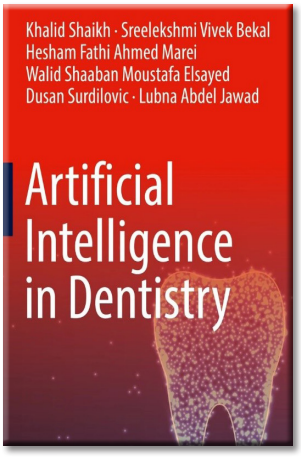

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Books Review

As dentistry advances, artificial intelligence (AI) can become a cornerstone, offering remarkable opportunities to significantly improve disease diagnosis and treatment procedures. The six authors share their expertise in AI in the book entitled *Artificial Intelligence in Dentistry*. The book is divided in eight chapters.

This book provides a comprehensive introduction to state-of-the-art applications and technologies for improving diagnostic accuracy and predicting treatment outcomes in dentistry by using AI and machine learning (ML).

It is a book that looks at the merger of dentistry and AI, providing valuable insights into the successful integration of AI into oral health. Aimed specifically at oral health practitioners and researchers, the book contains organized chapters and up-to-date references, making its structure easy to navigate.

The first two chapters cover dental history, evolution, and specialties while introducing dental anatomy, nomenclature, and developmental disorders to ensure a solid understanding of fundamental concepts before addressing AI topics.

Chapter 3 covers prevalent oral health conditions, and Chapter 4 examines the links between oral health and general well-being. The importance of early detection and prevention of oral diseases is emphasized. The book's holistic approach highlights the critical role of AI in improving dental care globally.

Chapter 5 discusses the innovative and advanced technologies that have radically transformed dentistry. Chapter 6 is a valuable resource for understanding AI for those who want to understand the fundamentals of AI in dental applications.

Chapter 7 explores the application of AI in oral health and imaging, highlighting effective AI-powered solutions for global health, including dental trauma prevention, periodontal risk assessment, caries prevention, and early childhood caries detection. The last chapter presents an example of a multiclass classification algorithm based on X-ray images.

The authors provide a comprehensive guide to the general and clinical aspects of dental and oral health problems and the etiology, prevalence, evaluation and management of these conditions.

It combines engineering and healthcare applications and is an important reference for researchers, biomedical engineers, dental students, and dentists.

In conclusion, this book is an indispensable resource for any practitioner interested in future developments in dentistry and the intersection of dentistry and AI.

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