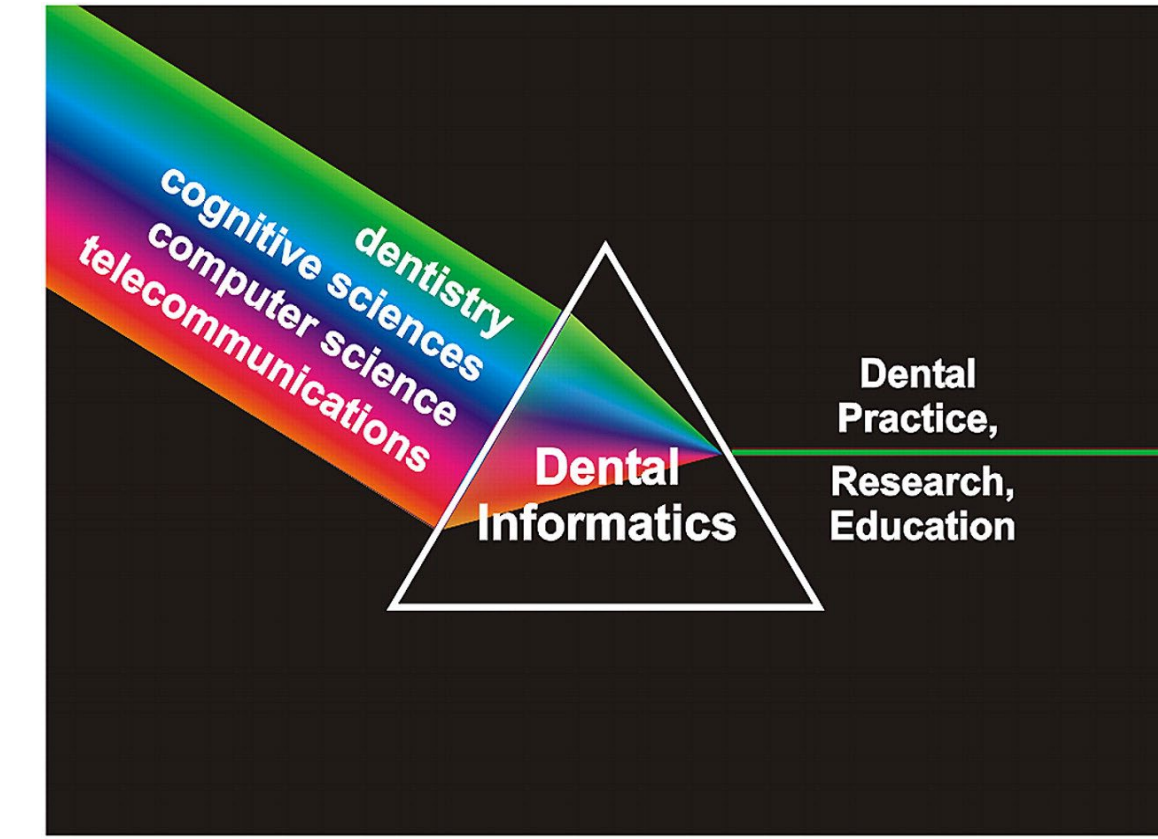


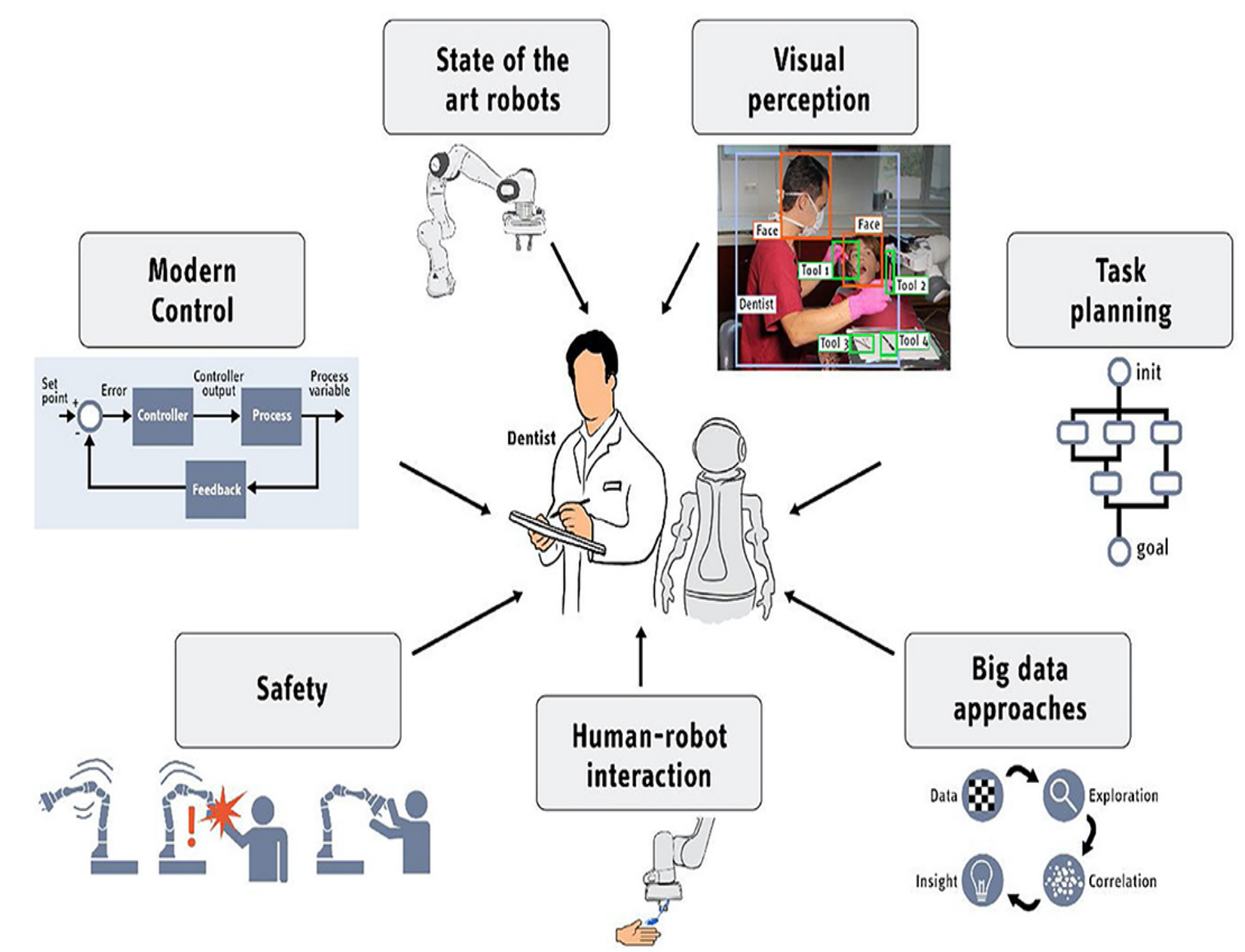
INTRODUCTION

Dental informatics refers to the application of computer and information science to improve dental practice, research, education, and patient management. It is an interdisciplinary field that combines knowledge from dental science, information technology and computer science. This field has a potential to enhance the quality of dental care delivery and patient outcomes. Use of technological advancements like Artificial Intelligence(AI), Machine Learning, predictive analysis models and Internet of Things(IoT) can aid the dentist in diagnosis and treatment of dental conditions.



METHODS & MATERIAL

A literature review was conducted on Dental Informatics, focusing on frameworks overseeing its integration. The search encompassed terms such as "artificial intelligence," "Dental Informatics," "Tele-dentistry," and "Electronic health records." Articles from 2010-2022 were considered, limited to English language peer-reviewed publications. PubMed and Google Scholar were the primary databases utilized. Various applications of informatics in dentistry were found to be revolutionary and aid in better patient outcomes.



RESULTS

DENTAL INFORMATICS APPLICATIONS

1. Artificial Intelligence (AI) in Dentistry:

- 1.Enhanced diagnosis through AI-driven analysis of radiographs.
- 2.Personalized treatment plans via clinical decision support systems.
- 3.Precise implant placement guided by AI algorithms.

2.Tele-Dentistry:

- 1.Remote consultations and treatment planning.
- 2.Improved access to oral healthcare, especially during COVID-19.
- 3.Cost-effective care for underserved populations.

3.Forensic Dentistry:

- 1.This field aids in human identification for legal cases.
- 2.Advanced tools for analyzing bite marks, lip prints, and dental remains.

4.IoT and Smart Dental Devices:

- 1.Integration of IoT technology for smart dental devices.
- 2.Smart toothbrushes capture brushing habits and angles.
- 3.Monitoring bruxism, pH levels, salivary flow, and sugar levels.

CONCLUSION

Dental informatics is rapidly growing and poised to revolutionize dental care delivery. Emerging technologies like AI, Machine Learning, and Tele-dentistry show promise in enhancing patient outcomes and interdisciplinary collaboration. Despite its potential, challenges such as training, data security, and privacy need addressing. Further research and development are essential for successful implementation and expansion of dental informatics.

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