



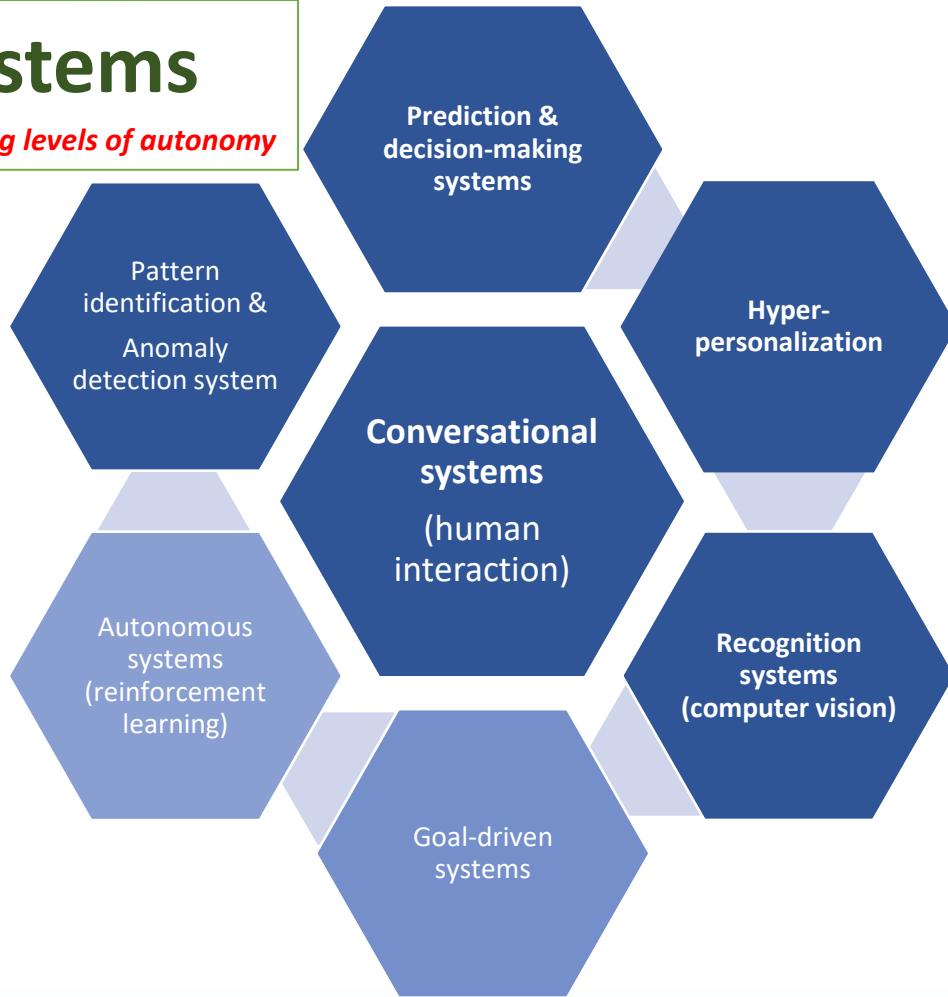
# Relevance of Artificial Intelligence in Ayurveda

Dr. Ranja Sarkar



# AI Systems

*operating at varying levels of autonomy*



**"A machine-based system that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments."**

- *The Council on AI of the Organization for Economic Cooperation and Development (OECD)*

<https://ranjas.substack.com/p/artificial-intelligence>



# AYUSHDHARA

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Review Article

## ARTIFICIAL INTELLIGENCE (AI) IN AYURVEDA: ITS APPLICATION AND RELEVANCE

Sanjay Gupta<sup>1\*</sup>, Narasimha V<sup>2</sup>, Vijaya Lakshmi A<sup>3</sup>

\*<sup>1</sup>PG Scholar, <sup>2</sup>Associate Professor, <sup>3</sup>Professor and Head, PG Department of Dravyaguna, Dr. BRKR Government Ayurvedic College, KNR University of Health Sciences, Hyderabad, Telangana, India.

- ❖ Continuous health monitoring & hyper-personalized treatment → 

With clinical data, genetic information, lifestyle patterns, plus real-time patient data from wearable devices, **prediction of potential health issues and timely suggestion of preventive measures customized to the patient.**
- ❖ Diagnosis & prognosis → 

More accurate and early diagnosis, improving treatment outcomes; one knows the prognosis by **monitoring the imbalance of Doshas and monitoring Vikriti.**
- ❖ AI-powered virtual assistance & consultation → 

Answer patient queries, offer preliminary advice, **particularly advantageous in remote or underserved regions; Access to expert guidance facilitating remote consultations & enabling widespread dissemination of the ancient knowledge.**
- ❖ AI-based identification of medicinal plants & herbs → 

**NLP (translation etc.) can extract relevant information from ancient Ayurvedic Sanskrit texts helping to identify medicinal plants, and screen herbs; use of image processing & DL to facilitate the development of potent and targeted herbal formulations.**
- ❖ Standardization of drugs → 

**ML algorithms can analyze samples to detect deviations from standard formulations enhancing safety**



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## Integration of Artificial Intelligence in Ayurveda Diagnostics

Soniya Seshan<sup>1</sup>, Man Mohan Sharma<sup>2</sup>, Ved Prakash<sup>3</sup>

<sup>1</sup>Post Graduate Scholar, Dept. of Roga Nidan Evum Vikriti Vigyan, MMM Govt. Ayurved College, Udaipur, Rajasthan, India.

<sup>2</sup>Professor, Dept. of Roga Nidan Evum Vikriti Vigyan, MMM Govt. Ayurved College, Udaipur, Rajasthan, India.

<sup>3</sup>Lecturer, Dept. of Roga Nidan Evum Vikriti Vigyan, MMM Govt. Ayurved College, Udaipur, Rajasthan, India.

- ❖ Evaluation of *Dosha* and identification of *Prakriti* (computer vision)
- ❖ Prediction of *Prakriti* (machine learning)
- ❖ Pattern recognition and in-depth analysis of *Vikriti* by AI-powered pulse diagnosis device



- ✓ Generate personalized health insights, diet, and lifestyle recommendations from the diagnostics



Editorial

Tanuja Manoj Nesari |

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## Artificial intelligence in the sector of Ayurveda: Scope and opportunities

- Importance of **ethics and data governance** while utilizing and integrating AI with Ayurvedic practices, as it entails working with confidential patient data .
- Need of multiple studies to critically assess the generalizability, **effectiveness, and dependability of AI for the advancement and promotion of Ayurveda globally.**
- Presence of Digital Helpline for Ayurveda Research Articles (DHARA), AYUSH Research portal, Traditional Knowledge Digital Library (TKDL), etc. only strengthens the position of Ayurveda in the digital era of AI, attempting to make it **efficient, sustainable and inclusive in nature.**
- The promise of knowledge databases toward searching and extracting several known and yet-to-be-discovered relationships between biological factors such as genes, symptoms, sickness problems, tissues, and potential treatments to build **knowledge graphs.**



## AI ASSISTS WITH EFFICACIOUS AYURVEDIC HEALTHCARE DECISIONS

- ❖ Ayurveda teaches harmony of self with nature. AI pushes to explore new horizons of intelligence  
→ *Human curiosity drives progress*
- ❖ Collection of (diverse) data that completely represents the experiential, intuitive, philosophical spectrum of Ayurvedic practice might be difficult  
→ *Understanding data limitations*
- ❖ Ayurveda aims to heal the imbalance within body; the world works by balancing technology with ethical & mindful use of data  
→ *What remains important is balance*

Ayurveda continues to inspire healthy living by meditation, yoga, diet, herbal remedy and AI continues to redefine human potential with data & technological innovation.

***"Collaboration between Ayurvedic practitioners, Data Scientists, Technologists is key to leveraging the capabilities of AI in revitalizing and promoting the timeless wisdom of Ayurveda."***