



ARTIFICIAL INTELLIGENCE IN
HEALTHCARE
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INTRODUCTION TO AI IN HEALTHCARE

WHAT IS ARTIFICIAL INTELLIGENCE?

WHY AI IS TRANSFORMING
HEALTHCARE

OVERVIEW OF TYPES

BENEFITS AND IMPACTS

CHALLENGES AND LIMITATIONS

CASE STUDY, FINAL TIPS & TAKEAWAYS



REACTIVE MACHINES

- No memory, no learning
- Respond only to specific inputs
- No understanding of past or future

Examples:

- ELIZA CHATBOT- Simulated doctor-patient conversation with no memory
- Spam filters; automated robots
- RULE-BASED CLINICAL DECISION SYSTEMS: respond based on predefined rules (drug interaction checkers)

Challenges

- Cannot improve or adapt over time
- Limited personalization



LIMITED MEMORY AI

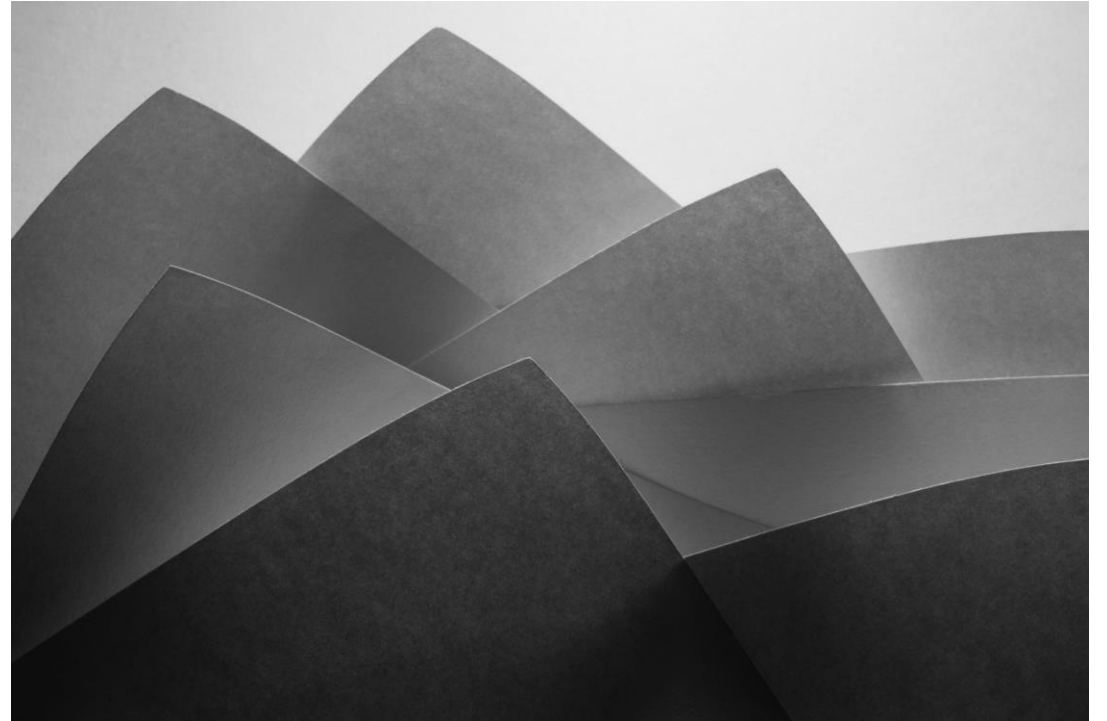
- Learns from past data
- Most current AI

Examples:

- IBM Watson for Oncology
- chatbots, ChatGPT, copilot
- virtual assistants

Challenges

- fragmented data and ethical concerns about bias must be addressed for safe and fair implementation.



THEORY OF MIND (EMERGING)

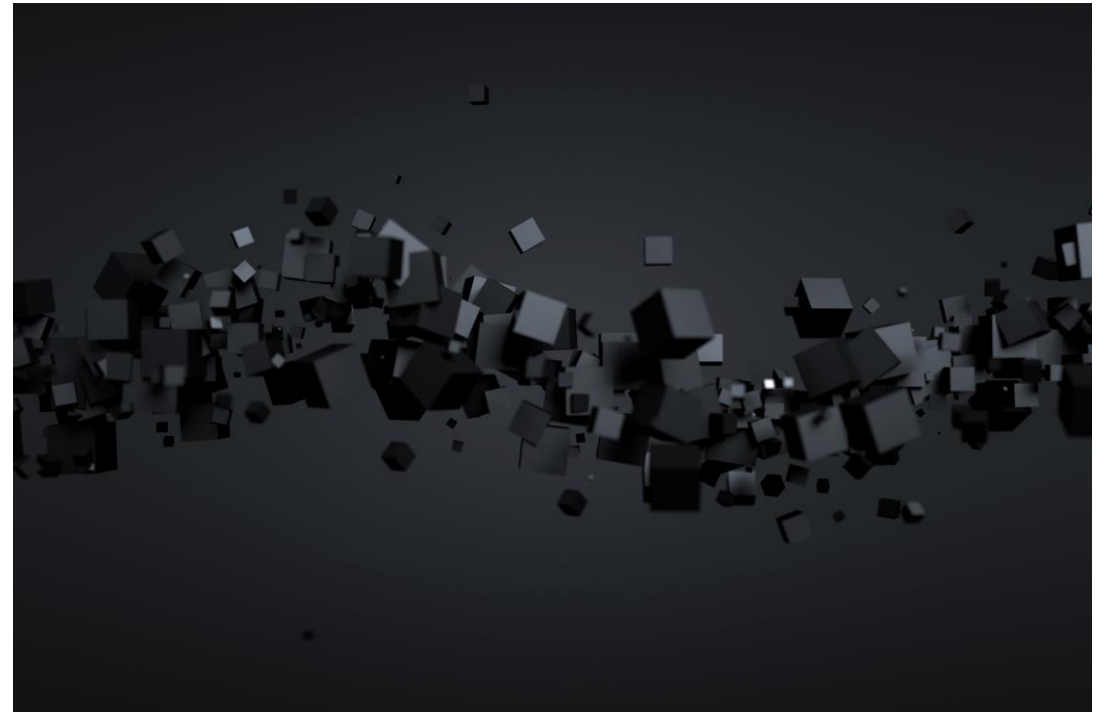
- Understands emotions and beliefs
- Anticipates actions of humans

Examples:

- Mental health bots
- Self driving cars
- Empathetic virtual nurses

Challenges

- tech is still far from maturity.
- Lack of personal connection



SELF- AWARE AI

- Doesn't exist yet
- Hints of self-awareness in current AI software

Examples

- Self driving cars
- AI chatbots

Challenges

- Philosophical questions



SUMMARY OF AI TECHNOLOGY

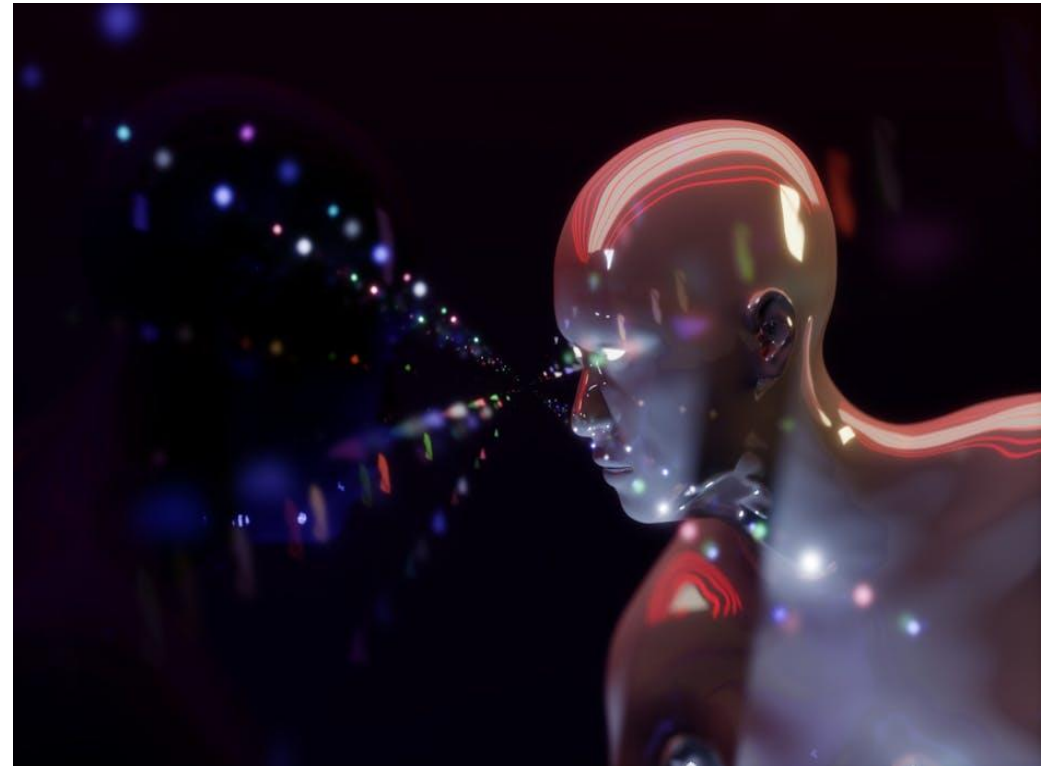
Type	Key Traits	Real Examples / Potential	Challenges
Reactive	No memory	Rule-based tools	Rigid, no learning
Limited Memory	Learns from past data	Watson, Aidoc, Epic	Data bias, regulation
Theory of Mind	Understands emotions	Empathetic bots (future)	Complex, ethical risks
Self-Aware	Conscious	Sci-fi stage	Accountability, trust



CURRENT AI APPLICATIONS IN SENIOR LIVING

1. Remote Patient Monitoring (RPM):

- RPM systems, often incorporating AI, allow healthcare providers to monitor vital signs and health data remotely from the comfort of a resident's room.
- Wearable devices and smart sensors track vital signs like heart rate, blood pressure, oxygen levels, and sleep patterns.
- AI algorithms analyze this data to detect early warning signs of potential health issues, like infections or changes in condition.
- This enables early intervention and can help prevent hospitalizations and improve outcomes.



CURRENT AI APPLICATIONS IN SENIOR LIVING

Fall Detection and Prevention:

- AI-powered cameras and sensors can detect falls and notify caregivers or emergency services immediately.
- Some systems can even analyze movement patterns and predict fall risk, allowing for proactive interventions.

Medication Management:

- AI can assist with medication management by reminding residents to take medications and alerting staff to missed doses or incorrect dosages.
- AI can also analyze medication data to help prevent harmful drug interactions.

CURRENT AI APPLICATIONS IN SENIOR LIVING

Predictive Analytics:

- AI can analyze large datasets of patient health information to identify trends and predict potential health risks, allowing for personalized care plans and early interventions.

Behavioral Monitoring:

- AI systems can monitor and analyze resident activities and behavior patterns to identify potential issues like increased agitation, restless sleep, or signs of pain or distress.
- This can help caregivers respond more quickly to residents' needs.

CURRENT AI APPLICATIONS IN SENIOR LIVING

Facility Management & Care Coordination


- Sales and Marketing: AI can analyze data and identify trends which can help with generating leads and improving occupancy management.
- Staff Scheduling: AI optimizes caregiver assignments based on need and availability.
- EHR Integration: AI systems synthesize health records for better care decisions.
- Staffing: AI forecasts when more staff are needed based on resident care levels.



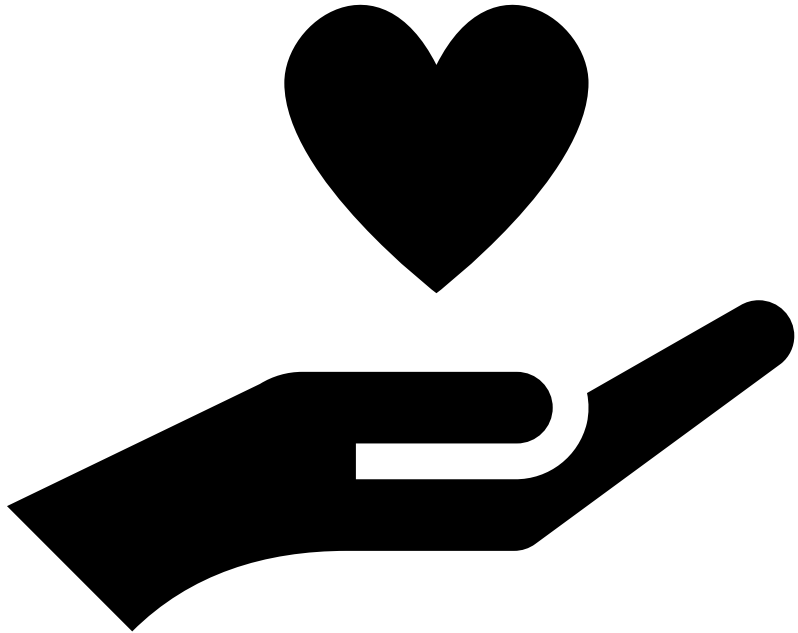


BENEFITS AND IMPACT OF AI IN SENIOR LIVING

RESIDENTS

- IMPROVED HEALTH OUTCOMES
 - PERSONALIZED CARE
 - ENHANCED SAFETY
 - INCREASED ENGAGEMENT
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BENEFITS AND IMPACT OF AI IN SENIOR LIVING

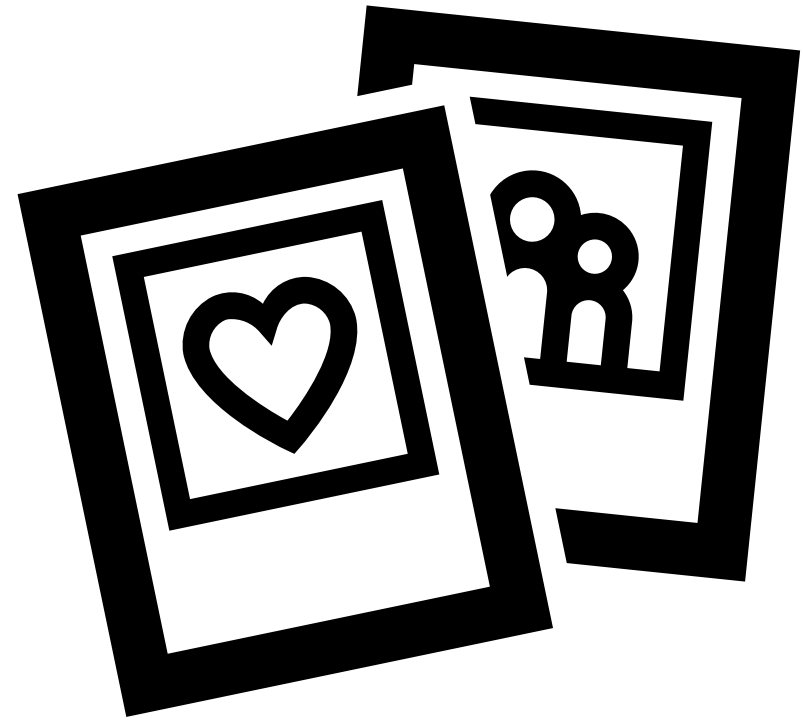


Caregivers/staff

- **Reduced workload**
- **Decision support**
- **Improved scheduling and staffing**
- **Training and support**

BENEFITS AND IMPACT OF AI IN SENIOR LIVING

- Families
- Peace of mind
- Better communication
- Higher trust in care



BENEFITS AND IMPACT OF AI IN SENIOR LIVING

Healthcare Owners/Operators

Operational efficiency

Regulatory Compliance

Data driven decision making

Competitive advantage



CHALLENGES AND LIMITATIONS IN HEALTHCARE

- Cost and implementation barriers
- Privacy & HIPAA Compliance
- Bias in AI models
- Staff Resistance
- Integration with old systems
- Regulatory Barriers



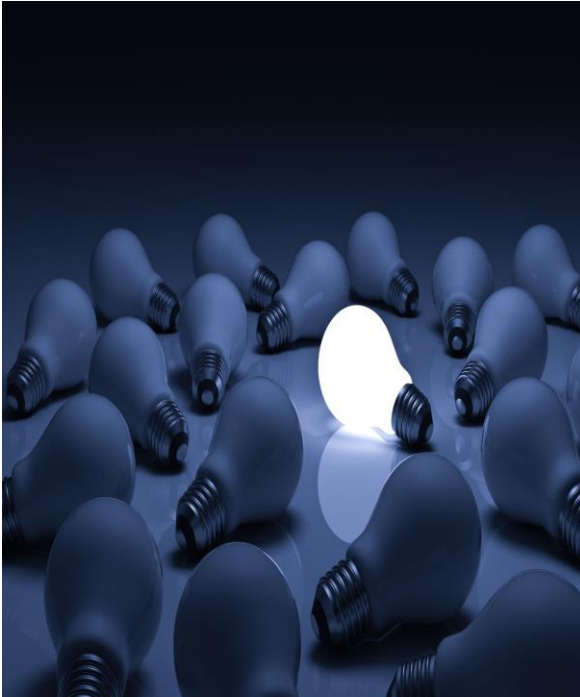
MAPLEVIEW SENIOR LIVING AND THE AVANTI SENIOR LIVING COMMUNITY

CASE STUDY



[Click here to watch video](#)

IMPLEMENTATION/LEAD INSIGHTS INTO SUCCESS



Adopt AI gradually



Ensure clear communication



Prioritize ethics



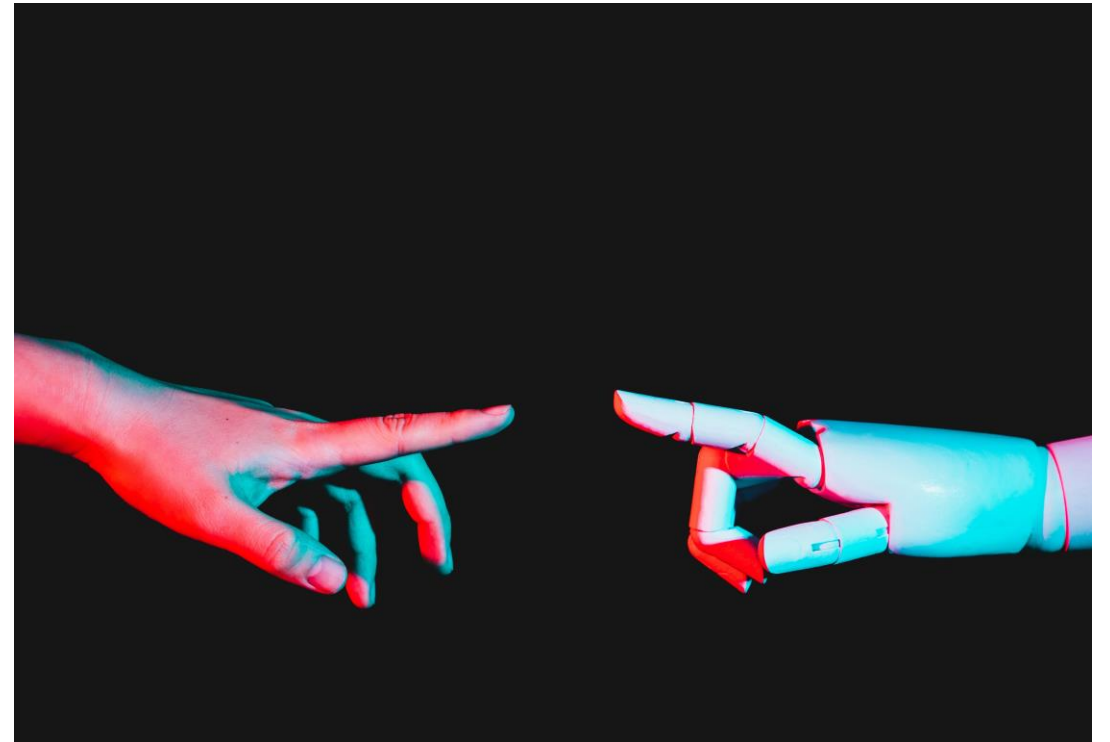
Provide training



Focus on design

FINAL TIPS & TAKEAWAYS

- AI is reshaping healthcare
- Knowing AI types helps manage expectations
- Tech, policy, and people must align for success



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THANK YOU