

# Emerging Frontier in Cardiovascular Care: Conversational AI & Virtual Voice Assistants

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**AIMed CARDIOLOGY**  
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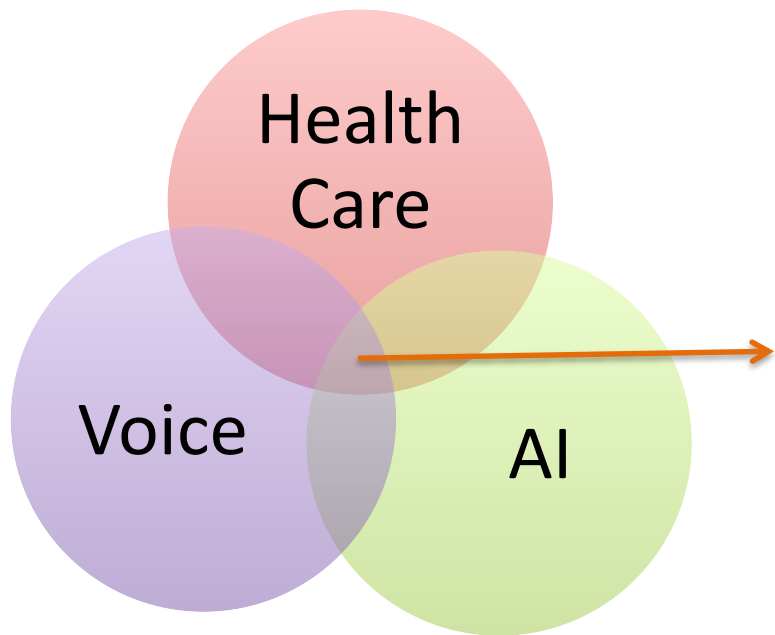
# Agenda

## Conversational AI

1. Introduction
2. History: How did we reach here?
3. Present State
4. **Potential uses: The Impact**
5. Challenges in Adoption
6. Future Directions



# Voice Augmented World



Health Care  
Conversational  
AI



# Introductory Concepts

- **NLP:** This AI methodology allows the computer to process and understand spoken as well as written human language.
- **Conversational AI:** Technology which allows Human Machine interaction through the use of Natural conversation, utilizing voice user interface and Machine Intelligence.

Human



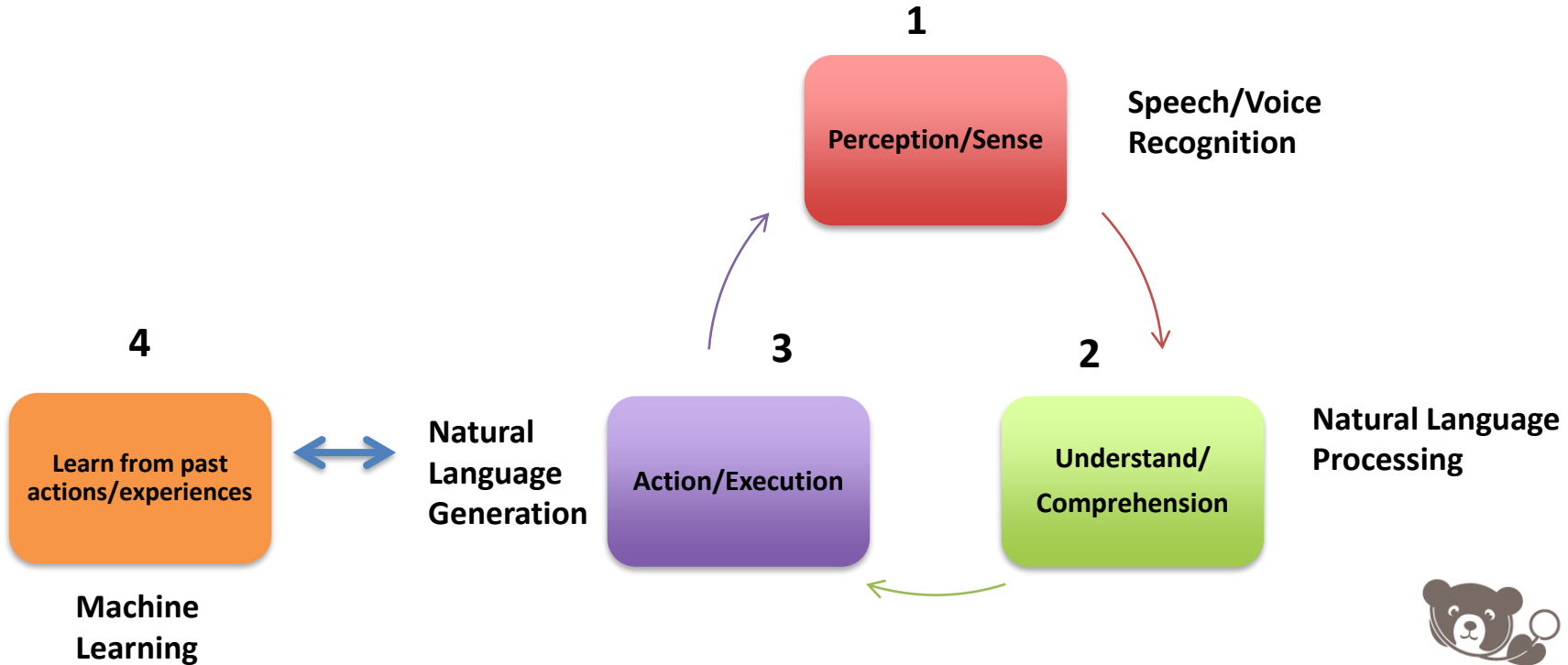
Smart Machines



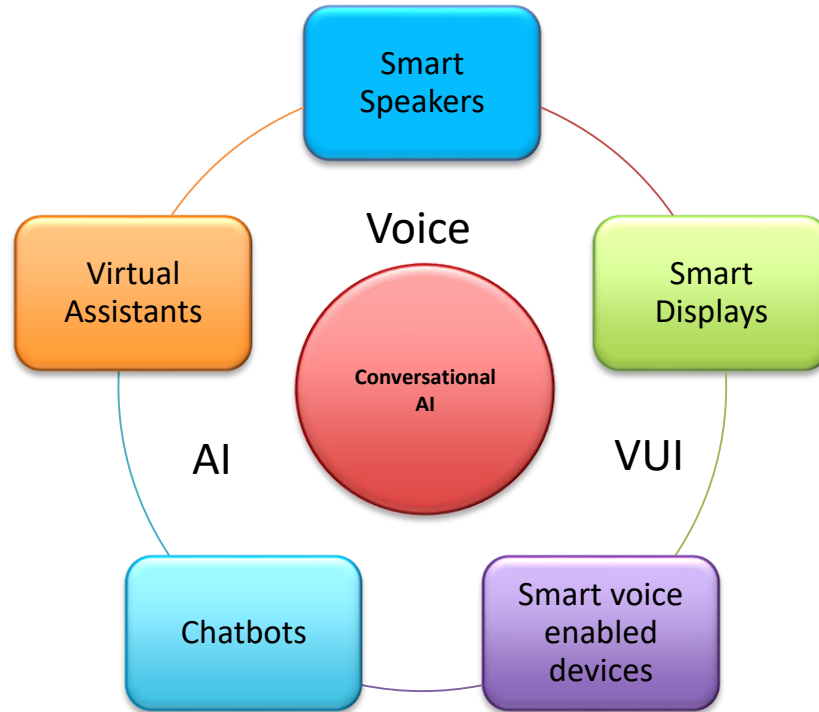
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# Conversational AI = Machine Hearing + Speech

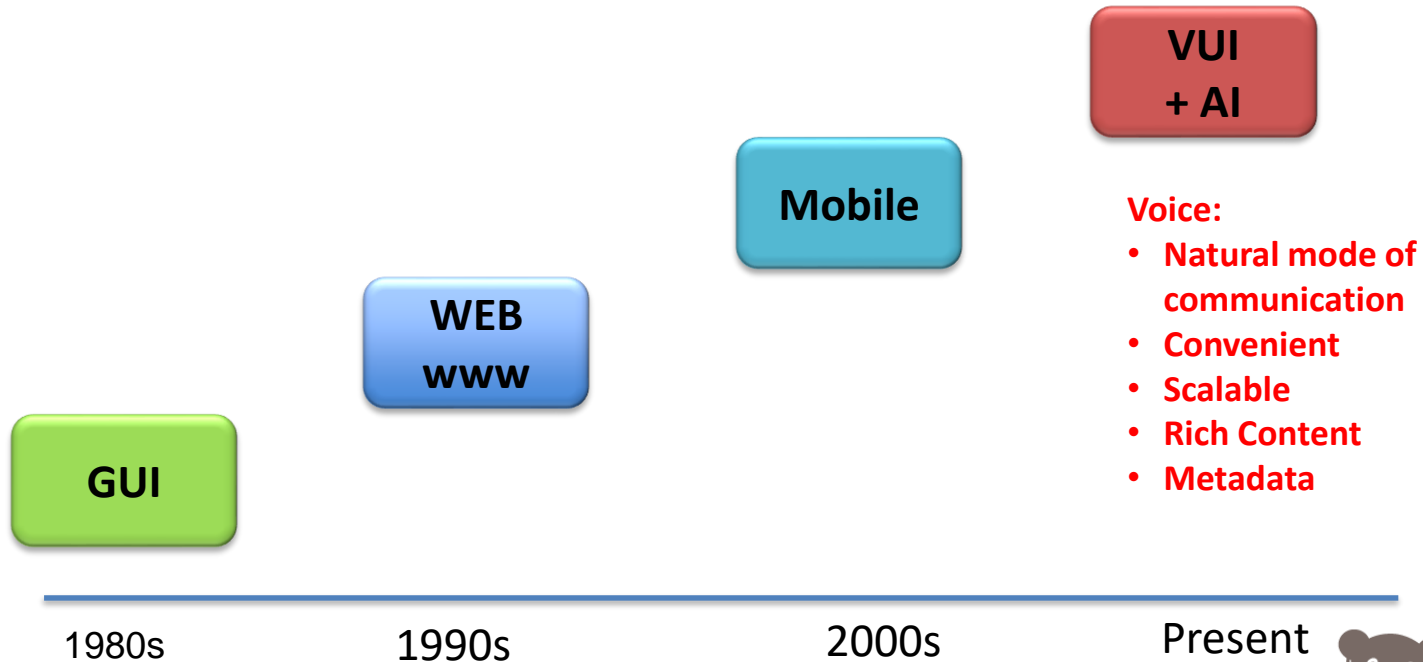
- Natural Conversation using Machine Intelligence



# Conversational AI : Current Applications



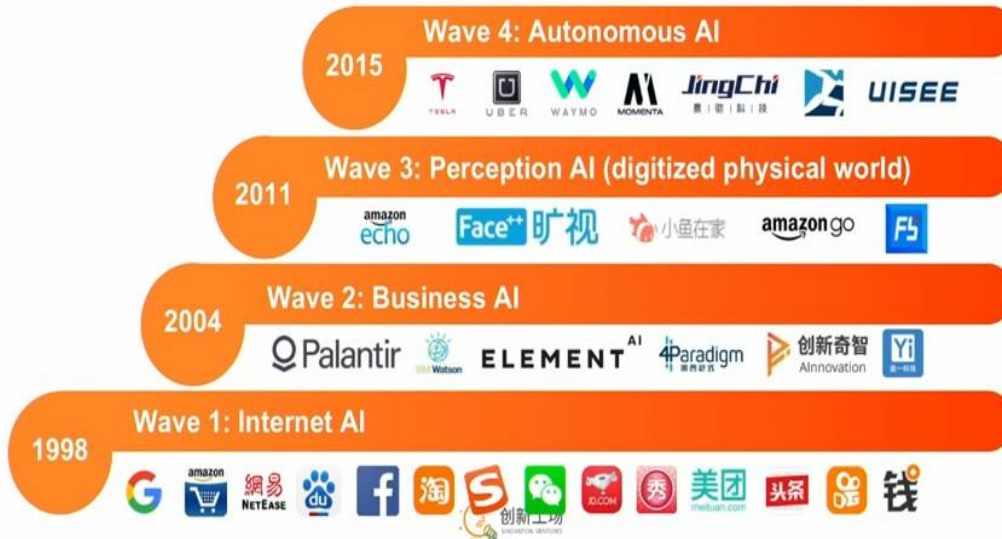
# History: Human Computer Interaction



# Four Waves of AI Applications: Dr. Kai-Fu Lee

AI  
SUPER-  
POWERS  
CHINA,  
SILICON VALLEY,  
AND THE  
NEW WORLD ORDER  
KAI-FU LEE

## Four Waves of Artificial Intelligence Applications



Conversational AI



# Putting Them Together

**Conversational  
AI**      **Cardiology**



# Conversational AI in Cardiology

- Use it to ease our professional life?
- Augment care we provide?
- Foster its development as a community?
- Overcome the challenges in adoption?



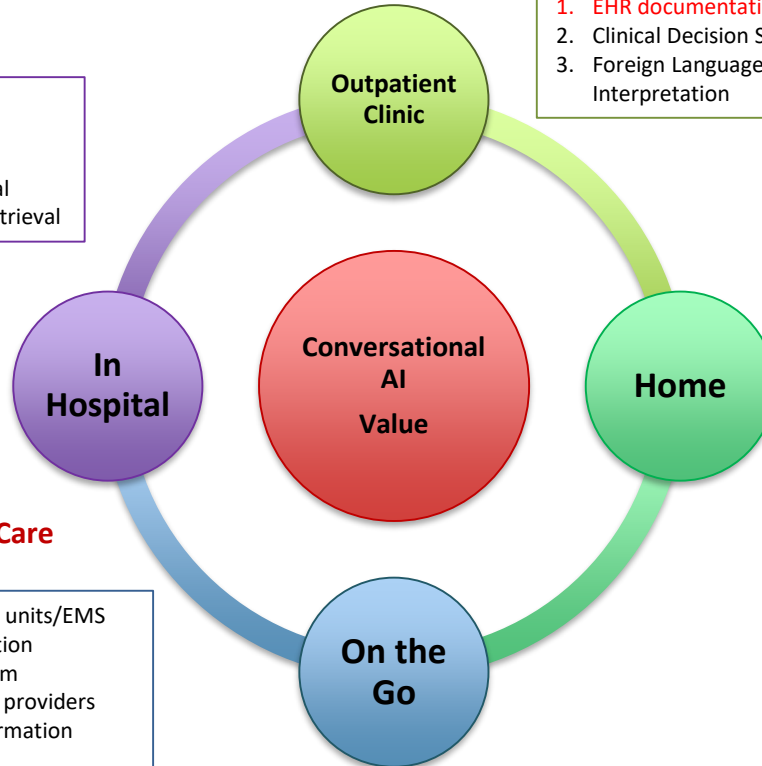
# Conversational AI Value in CV Health Care Delivery

## Easing the Hospital Journey

1. Patient Education, Inpatient care navigation
2. Discharge preparation
3. Operating suites: Hands free clinical documentation and information retrieval

## Bridging the Care Gap

1. Mobile Health units/EMS
2. Patient Education
3. Care Continuum
4. Access to care providers
5. Access to Information



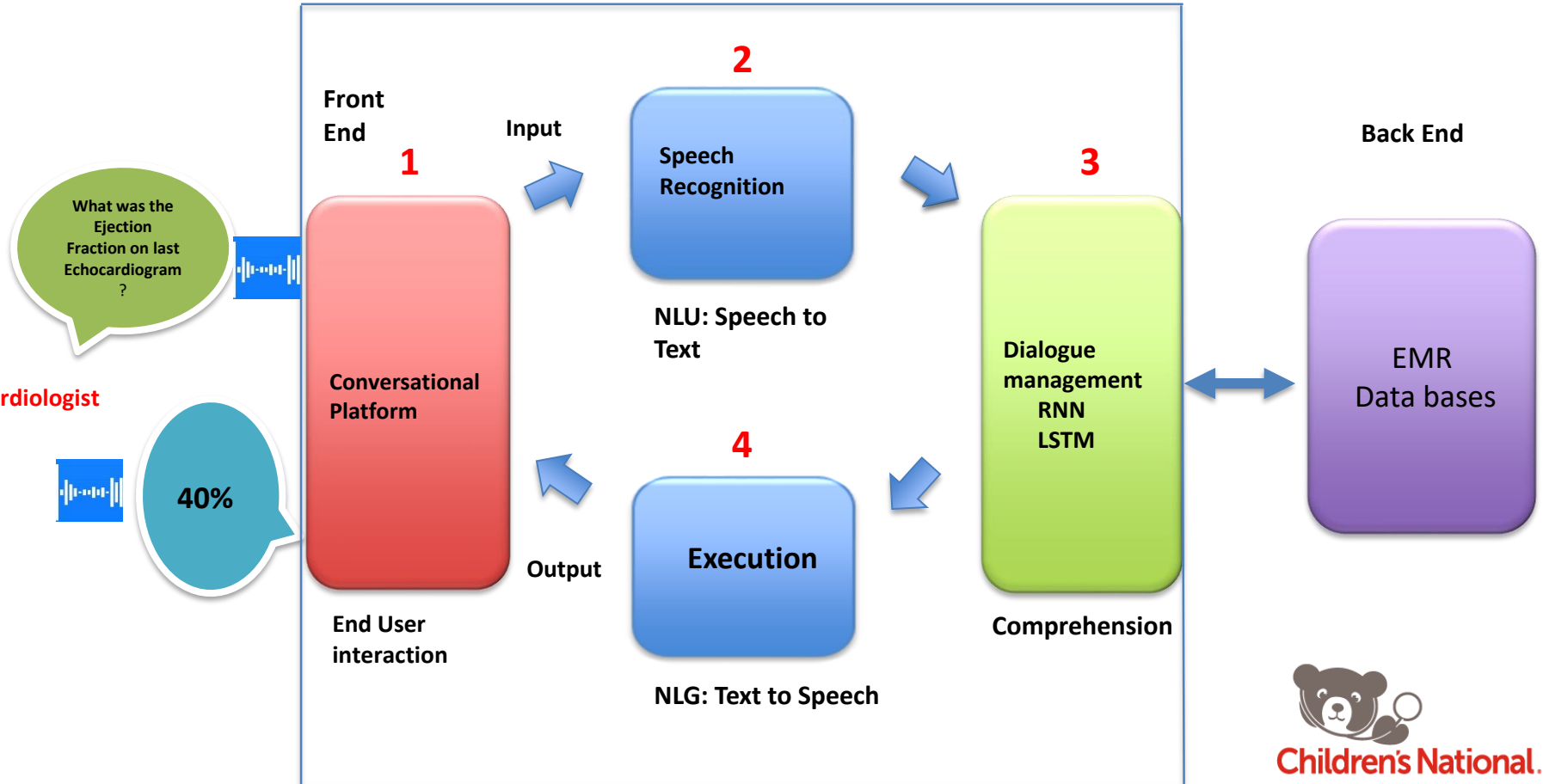
## Decreasing Physician Burnout: POC Tasks

1. EHR documentation, navigation
2. Clinical Decision Support
3. Foreign Language Interpretation

## Home Health Optimization

1. Appointment Navigation
2. Patient Education
3. Patient Engagement
4. Medication management
5. Chronic care management: bridging the care gap

# AI Pipeline : Conversational Agent in Cardiology



# Challenges in Conversational AI Adoption ?

- Privacy
- Security
- Accuracy
- Reliability
- Trust
- Ethics
- Design and smooth workflow integration

# Future Directions: Humanizing the Virtual Assistants

- Context specific Empathy
- Cognitive capabilities
- Proactive versus reactive voice



# Conclusion

For maximum benefit, we need:

- Identification of proper use cases
- Design of good end user experience
- Smooth integration in the workflow
- Sharing of best practices
- Strategic scaling



Thanks!



Thanks  
for your  
time



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