



AI

Applications

- Self Driving Car
 - Sensors
 - Inference
 - Communication
 - Ethics
 - Symbiosis / Centaurs
- Prof. Services
 - Admin Asst X.ai
 - Legal
 - Review
 - Discovery
 - Standard Language
 - Audit
 - Outlier Detection
 - Engineering
 - Structural Design
 - Finance
 - Pitfalls
 - Black Monday
 - LTCM
 - HF Trading
- Media
 - Content Recommendation
 - Hit Music Generation
 - DeepFakes
 - Generative Art
- Security
 - Predictive Policing
 - Drone AI
- Space
 - Mars Rover
 - Europa Diver

Architecture

- Sensing
 - Keyboard & Mouse
 - Computer Vision
 - Hearing
 - Language
 - Speech
 - NLP
 - Smell & Taste
- Representation
 - Abstraction
 - Optimization
- Reasoning
 - ML
 - Logic
 - ANNs
- Acting
 - Screens
 - Robotics

LHS & AI

- Ethics
- Patientslikeme
- Example: Reinforcement
- It's why the EHR may be worth it
- Cast cost as a game to win

Definition

- The impossible thing that computers will do next
- The computational part of achieving goals

History

- Origins
 - Dartmouth
 - McCarthy, Minsky, Rochester, Shannon
- Early Development
 - Expert Systems
 - Connectionism
 - AI Winter
- Renaissance
 - Machine Learning
 - Deep Learning
 - Pop Culture

Participants

- Government
 - US
 - China
- Academic
 - Leaders
 - Conference
- Commercial
 - Tech Titans
 - Startup Explosion
 - OpenAI

Conclusions

As will be mentioned in more detail in Chapter 3 & 4, history has shown that AI has gone through multiple cycles of emphasis and disillusionment in use. Managing public expectations and understanding of AI and associated technologies is imperative in order to apply AI in effective ways that have reasonable opportunities for sustained success.

Support and emphasis for open source and free tools and technologies for use and application of AI will be important to reduce cost and maintain wide use of AI technologies as the domain transitions from exponential growth to a future plateau stage of use.

The domain needs strong patient and consumer engagement to ensure preferences, concerns, and expectations are transmitted and appropriately addressed by AI stakeholder users.

Large scale development of AI technologies in industries outside of healthcare should be carefully examined for opportunities for incorporation of those advances within healthcare. Care should be taken during this process, as some tools may not have an easy translation to the processes and workflows in healthcare.