**Definition of AI**

An intelligent agent (system hat perceives it‘s enviorement and takes action to maximize its chances of success).

Industrial revolution -> free human from physical endeavor

AI -> free human brain (mental) endeavor

4 schools of AI

* Thinking humanly
* Acting humanly -> Turing machine (Turing test) (Flying airplane)
* Thinking rationally -> Using math and logic to define AI (not everything can be expresses by logical notation, too much resources).
* Acting rationally -> Best expected outcome of the action.

**Application of AI**

* Speech recognition (Siri, google now, Echo)
* Handwriting recognition (atm machines bill and checks)
* Machine translation
* Robotics
* Recommendation systems within Ecommerce
* Spam Filter in emails
* Face detection (use rectangle feature
* Detecting infections
* Games (chess - 1997, Jeopardy - 2011, Go -2016) – via Deep learning, Search algorithm, reinforcement learning
* Autonomous driving

MANY MORE!

**Foundation of AI**

* Math -> 2 the logic (algoritm)
* Economics -> 3 formal rational decision, Game Theory
* Linguistics
* Cybernetics - > Combination between computer engineering and Hardware (scanners)
* Computer engineering -> 6
* Neuroscience -> 4 brain functionality
* Psychology -> 5 Cognitife science (study language and thinking)
* Philosophy -> 1 the idea under AI

Resources: JAIR, TPAMI, JMLR, IJCAI, AAAI, IAAI, CVPR, ECAI, ICML, NIPS etc.

**History**

* 1940-1950 Gestation of AI – Boolean circuit to model of brain  
  Turing test
* 1950-1970 – Early enthusiasum (Birth of AI 1956) Dartmounth meeting
* 1970-1990 Knowledge-based AI, Expert systems, Ai becomes an industry and AI winters.