

CMSC 671: Principles of Artificial Intelligence 50 years in AI

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- PhD in Psychology, 1976, followed by MS in CS, 1985.
- AI development groups, Burroughs/Unisys/Paramax/Unisys/Loral/Lockheed, 1985-1997.
 - Beacon (Hardware Configurator), KSTAMP:(Expert system tool for maintenance of the postal equipment), ReEngineer (System for converting code from one language to another, through abstract language Gray)
- AI research, SmithKline Beecham/GlaxoSmithKline
 - Intelligent Integration of disparate data sources, Text Mining, Capture of human knowledge in a wiki
- Teaching: 1987? to now.
 - AI, Expert Systems, Semantic Web, Web Mining, Text Mining, Software Development, Machine Learning.

50 years ago

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- First AI course, 1965 (or so?), Michigan State University
 - Hardware available was a CDC 3600, with 64K of 48-bit words of core memory.
 - Software we used included Lisp. IPL-V and Hint.
 - Data storage available was reel-to-reel tapes
 - Input available was tape or punched cards
 - Output available was 136 character wide computer paper.
 - Text was *Computers and Thought*, Feignebaum and Feldman, 1963.

How has AI changed?

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- Focus went from computation in the 60s to knowledge representation in the 80s (expert systems) and is now swinging back to computation.
- Languages went from Fortran and IPL-V and Prolog to Java and C++ and Python — but Lisp!
- Interactions went from slow (24 to 48 hours) , paper based to very fast interactive.
- Currently, we are using massive computer power in the cloud, with individual devices primarily as display.
- Heavy focus right now on machine learning. I think we are about due to swing back to more attention to knowledge-based systems that can be applied without massive data pools and massive compute power
- But I've been wrong often over 50 years!

Dave

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- BS in math, 1963, 2 years studying cognitive psychology, PhD in CS 1979.
- Teaching 1979-1985.
- R&D groups Burroughs, etc, 1986-1999.
- Teaching, directing masters program 1999-now
- And teaching as an adjunct throughout his time in industry. AI, NaturalLanguage Processing, Game Development, Programming Languages, Data Structures.
- I'll let him answer questions about it!