Since the 1950s when Arthur Lee Samuel developed a checkers player capable of learning from experience, IBM has been a pioneer in using artificial intelligence to play and win against top humans in games of intellect and strategy. Twenty years later IBM defined how people think about speech recognition to this day. Another twenty years and IBM Research made history when chess-playing machine Deep Blue beat Garry Kasparov and became the first chess-playing machine to defeat a reigning world champion. IBM researchers continue to take on new AI challenges in the areas of machine learning, neuroscience, genomics and robotics. 1. 1949: Checkers Player 2. 1954: Mark I and Mark II Automatic Language Translators 3. 1972: Probabilistic Speech Recognition 4. 1984: First Real Time Demonstration of a Large Vocabulary Speech Recognition **Dictation System** 5. 1985: Limited Reasoning 6. 1988: Statistical Translation Between Languages 7. 1992: <u>TD-Gammon</u> (Computer Backgammon) 8. 1995: Reasoning about Knowledge 9. 1997: Deep Blue Chess 10. 2002: BLEU: Bilingual Evaluation Understudy 11. 2009: UIMA: Unstructured Information Management

12. 2009: More Statistical Machine Translation

13. 2011: Watson Jeopardy Challenge