Deep Blue

This paper goes over the techniques involved in building a chess agent named Deep Blue, developed at IBM Research during the mid-1990's . The purpose was to build an agent which could efficiently compete against actual human players.

There were number of hardware and software techniques used in building an efficient system. The large searching capability, non-uniform search, and complex evaluation function were all critical. However other factors also played a role, e.g., endgame databases, the extended book, and evaluation function tuning. The major factors that contributed to this success in computer industry, to name the few,

- a single-chip chess search engine
- a massively parallel system with multiple levels of parallelism
- a strong emphasis on search extensions
- a complex evaluation function
- effective use of a Grandmaster game database

The result was that Deep blue defeated the then-reigning World Chess Champion Garry Kasparov in a six-game match in 1997.