

In 1966, computer science was still young but moving fast. Here's a snapshot of the state of the art around that time, across key areas:

1. Hardware

- **Mainframes ruled:** IBM's *System/360*, launched in 1964, was dominant. It introduced a family of compatible machines—a big shift from bespoke systems.

- **Transistors > vacuum tubes:** Most computers had moved to second-generation *transistorized* designs, though integrated circuits were just beginning to appear.

- **Memory:** *Magnetic core memory* was standard. Reliable, but physically large and expensive. A typical mainframe had kilobytes to a few megabytes of RAM.

- **Storage:** Magnetic tape and early hard disk drives (like IBM's RAMAC) stored data. Punch cards were still common input/output.

2. Software & Programming

- **Languages in use:**

- *Fortran* (scientific/engineering),
- *COBOL* (business data processing),
- *LISP* (AI research),
- *ALGOL* (academic/theoretical use).

- **Time-sharing systems:** These were emerging, allowing multiple users to share computing power. MIT's CTSS (Compatible Time-Sharing System) was influential.

- **Operating systems:** Primitive by today's standards.

UNIX hadn't been invented yet (arrives in 1969). Most systems ran custom OSes or batch job processors.

3. Networking

- **No internet yet:** ARPANET, the forerunner to the Internet, was still three years away (1969). But ideas about packet switching and distributed computing were starting to circulate in academic and military circles.

4. Artificial Intelligence

- **AI was real, but narrow:**
 - Early work in *symbolic reasoning* and *game playing*.
 - Programs like ELIZA (1966) mimicked psychotherapy through simple pattern matching.
 - Shakey the Robot (late 60s) was being developed at SRI—a mobile robot that could reason about its actions.
 - Researchers were optimistic; the “AI winter” disillusionment wouldn't set in until the 1970s.

5. Theory & Academia

- **Computer science departments were new:** Many universities still placed CS within electrical engineering or math departments.
- **Foundational theory:** Turing Machines, automata theory, and formal languages were being rigorously explored.
 - Donald Knuth began publishing *The Art of Computer Programming* in the late 1960s.

6. Cultural context

- Computers were seen as *exotic* and *powerful*, often associated with military use (e.g. nuclear command systems), research labs, and corporations.
- Public understanding was vague—machines that filled rooms and answered to men in lab coats.
- Films like *2001: A Space Odyssey* (1968) and books like *The Billion Dollar Brain* captured the growing mystique and anxiety around computing.