Moore's Law History

- **Alan Turing** in his **1950** paper "**Computing machinery and intelligence**" had predicted that by the turn of the millennium.
- we would have "**computers with a storage capacity of about 10^9** " what today we would call *128 megabytes* processing speed, memory capacity, sensors, and even the number and size of pixels in digital cameras, for example, smartphone.
- After him, **Gordon Earle Moore** (born January 3, 1929; UC Berkeley BS Chemistry, 1950; Caltech PhD. major in Chemistry and minor Physics, 1954) is the *cofounder and Chairman Emeritus of Intel Corporation*.
- In 1965, Moore, a founder of *Fairchild Semiconductor* (later Intel), observed in his famous paper that
  - **"The number of transistors incorporated in a chip will approximately double every 24 months."**
  - "**the complexity for minimum component costs has increased at a rate of roughly a factor of two per year**"

Moore's Law History

- Extrapolating this trend for a decade, Moore predicted that chips with 65,000 components would be available by 1975.