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# **Inside the World of Computing**

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*Technologies, Uses, Challenges*

*Edited by*

Jean-Loïc Delhaye

Color Section

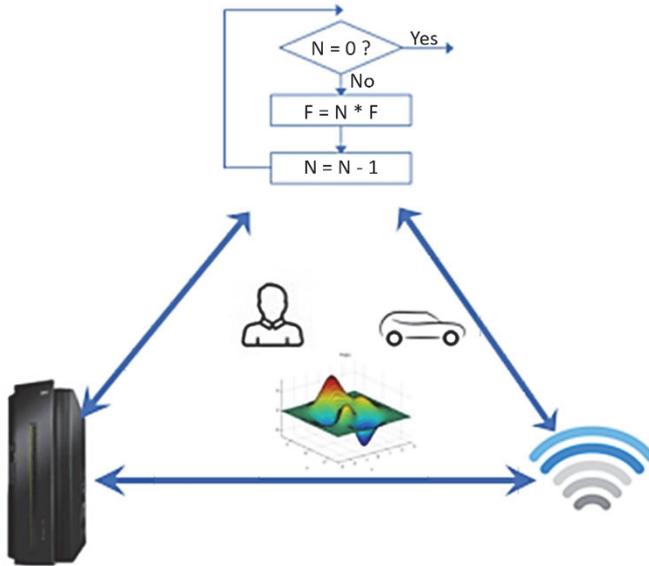


Figure P.1. Pillars of computer science

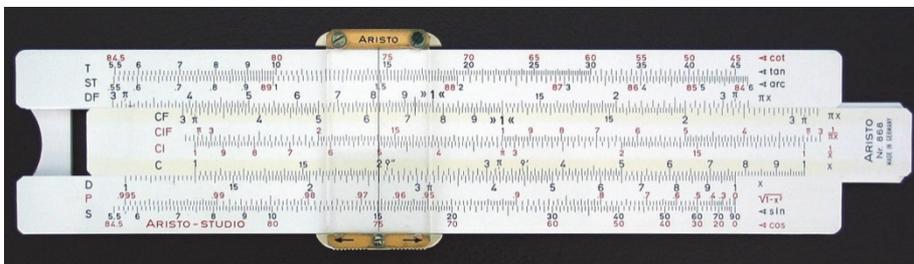
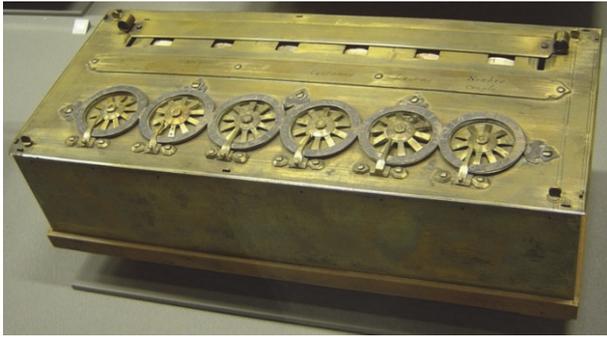


Figure 1.3. A slide rule (source: Roger McLassus)



**Figure 1.4.** A Pascaline (source: David Monniaux)



**Figure 1.5.** The Curta mechanical calculator (source: Jean-Marie Hardy)



**Figure 1.10.** IBM/360 computer (source: IBM archives)



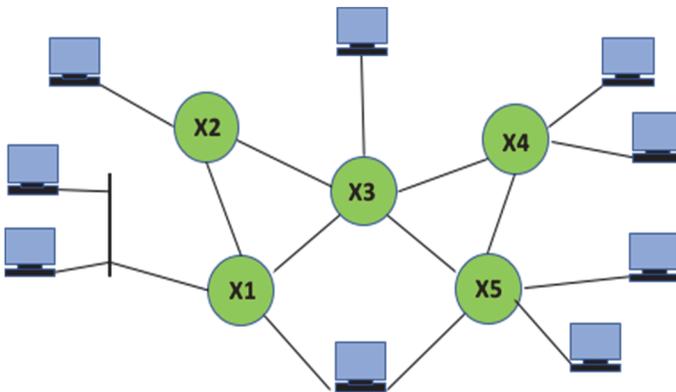
Figure 1.11. A PDP-8 computer (source: Alkivar, Wikipedia)



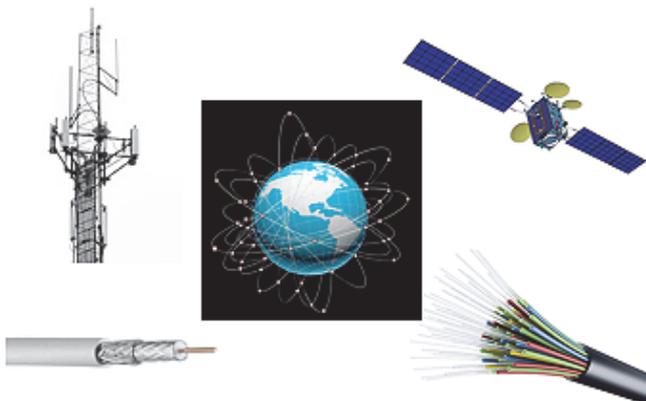
Figure 1.13. Cray-XMP (source: NSA Photo Gallery)



**Figure 2.1.** Morse code manipulator (source: Musée des Arts and Métiers)



**Figure 2.3.** Network diagram with stations and routers



**Figure 2.4.** Communication media



Figure 2.5. Twisted pairs and coaxial cable



Figure 2.6. Fiber optic bundle

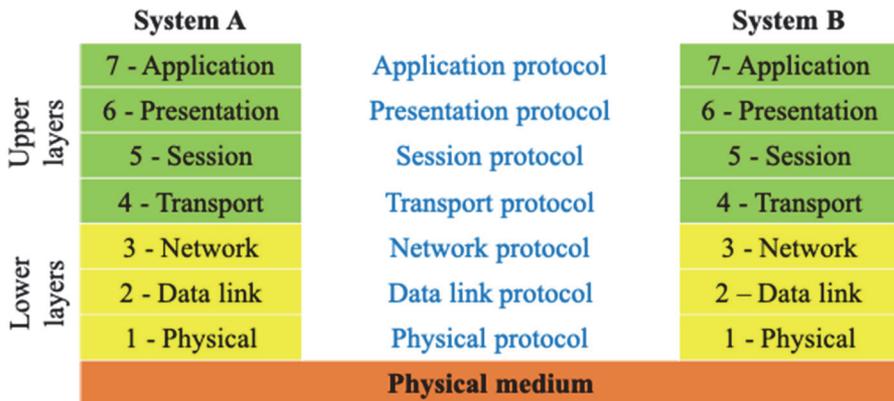


Figure 2.13. The OSI model

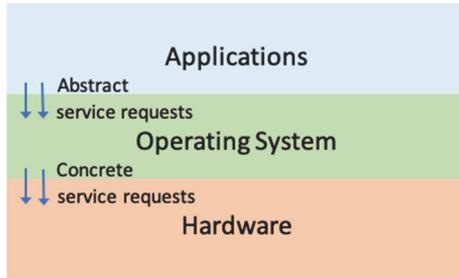


Figure 3.4. Role of the operating system.

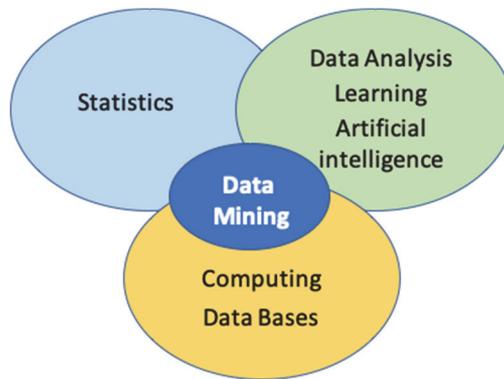


Figure 4.10. Position of data mining

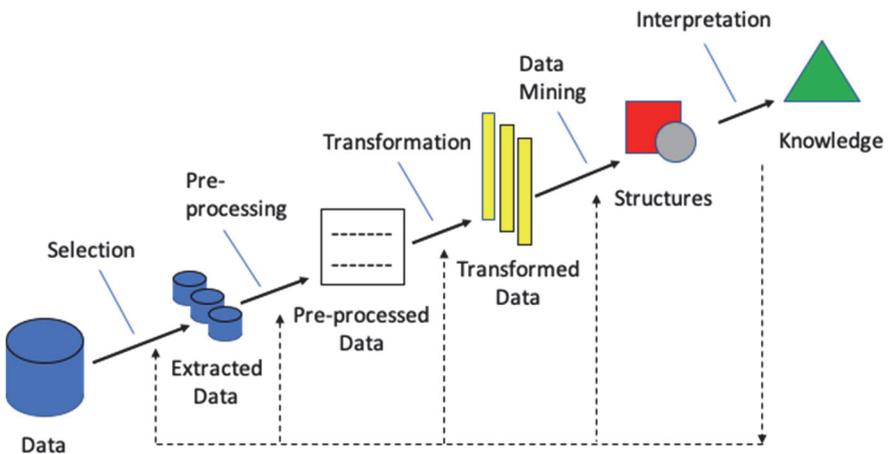
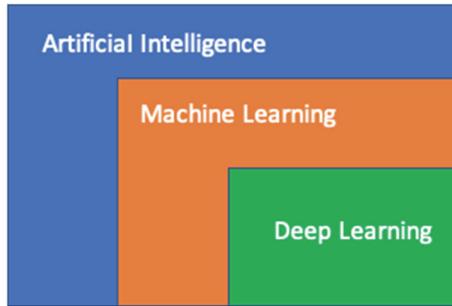


Figure 4.11. Knowledge extraction



**Figure 5.2.** *Learning levels*



**Figure 5.4.** *Three different resolutions (source: Wikimedia Commons)*



**Figure 5.5.** *Quality loss and compression ratio (source: Jean-Loïc Delhaye)*



**Figure 6.1.** *Assembly of welded sub-assemblies by robotization*  
(source: Cité des sciences et de l'industrie)



**Figure 6.2.** *An SAS Cube* (source: Bruno Arnaldi, Irisa)



**Figure 6.3.** *Various aspects of the smart city (source: Jean-Loic Delhaye)*