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First Lecture

A *well-posed learning problem* occurs when a computer program learns from experience E , w.r.t some task T and some performance measure P . learning occurs if its performance on T , as measured by P , improves with experience E .

Stages of intelligent systems:

1. Expert systems (1960s–1980s)
2. Unsupervised learning (1980s–1990s)
3. Data-driven learning (2000s)

This course will focus on the third stage. Increases in flexibility and model expressiveness correspond to exponential increases in the number of parameters and computational complexity, in terms of FLOPs and dataset size.

