Keynote: Design patterns for neuro-symbolic medical decision support systems

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Abstract

The medical domain is rich in both data and knowledge, and therefore very well suited for the deployment of neuro-symbolic techniques that combine data-driven learning with knowledge-driven reasoning. In this talk I will present an analysis of a corpus of some 40 neuro-symbolic medical decision support systems. The encouraging finding is that this variety of systems can be captured as refinements of only five archetypal neuro-symbolic architectures, and that each of these architectures can be captured in terms of just a handful of basic components. This offers new avenues for systematic development and comparison of neuro-symbolic AI for healthcare.

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