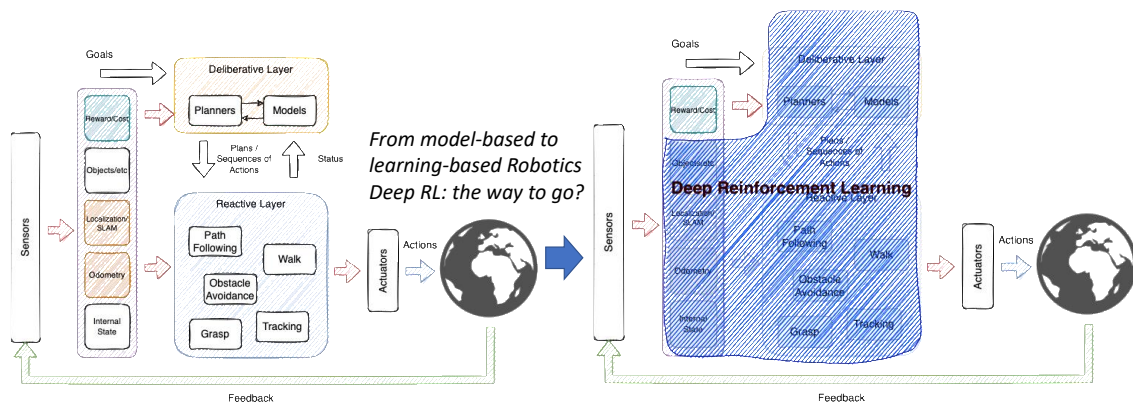


Talk: Learning in robotics: some of the challenges posed by embodied autonomous systems interacting in real-time with the environment

The talk discusses how machine learning is being used in robotics, that is, in the development of autonomous systems that operate and interact with the physical world. The talk presents some examples on the application of machine learning for the development of the main modules of a classical robot architecture. The talk shows that most current systems involved a mixture of data-based learned components and model-based components, and poses questions on how both approaches can be combined towards more powerful and autonomous robot systems. The talk discusses the implications and challenges that operating in the real world implies for the learning algorithms, modalities, and methodologies, like the inductive biases required, the role of the morphology, the limited number of exploration opportunities in robotics, learning in deliberative-reactive architectures, real-time issues, identifying closed-loop systems, generalization, etc.



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