



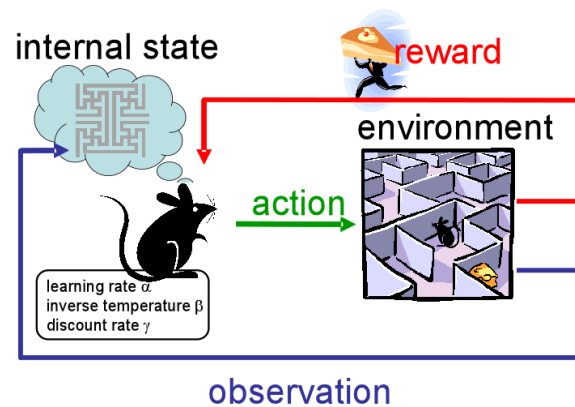
## Attentive Multitasking



Machine learning is one of the hot topics of today's world with algorithms becoming more and more capable to solve complex tasks. Most approaches tackle specific problems, i.e., try to become an expert at solving a given task. For some systems, it would however be more beneficial to have a decent performance across a large range of tasks. For example, one household robot that can clean, cook and water the plants is more useful than having three robots, one for each task.

In this thesis we want to address the problem of learning multiple tasks at once in a deep reinforcement learning setup.

**Requirements:** Knowledge in Deep Learning, or solid background in Machine Learning. Implementation experience is an advantage. You should be able to read and understand the first 12 chapters of the "Deep Learning Book" by Goodfellow et al. (available for free online from MIT press). If you are interested in the topic but new to deep learning we expect you to complete an introductory deep learning course before applying for the thesis, such as Andrew Ng's coursera course (use the free trial!)<sup>1</sup> or this Udacity course<sup>2</sup>.



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<sup>1</sup><https://www.coursera.org/specializations/deep-learning>

<sup>2</sup><https://classroom.udacity.com/courses/ud730>