Decision making under uncertainty on GPU

Decision making under uncertainty is exceptionally computationally demanding. Since the robot has to decide online the best action, a typical approach is to approximate the decision-making mechanism. In this project, we will harness the capabilities of the bleeding edge scientific language JULIA alongside NVIDIA CUDA to move computations to GPU. By massive parallelization, we hope to solve the decision making problem precisely.

Prerequisites: Strong programming skills. CUDA preferably.

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Duration: 1 or 2 semesters