

**Optimal decision making for complex
problems**
Lunar Lander

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1 Introduction

In this project, we have chose to try to solve the lunar lander¹ probleme from openAi gym. To do so, we have tryied two methods, the first one, by adapting code found² for an other problem, which use deep convolutional Q-learning. For the second one we tryied to implement A3C algorithm by ourself.

2 Deep Convolutional Q-learning

Deep convolutional Q-learning, as the name says, make use of a convolutional neural network, which take as an input images of the problem, and output the action to take.

¹<https://gym.openai.com/envs/LunarLander-v2/>

²<https://www.superdatascience.com/artificial-intelligence/>