Carles Gelada

AI researcher with more ideas than GPUs to test them.

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PROJECTS

Unifying value learning and model learning

(My current research project) I am working on learning values and models of MDPs in an end to end fashion, allowing planning algorithms to be used. The paper is still on the works but the latest version can be found here.

Variable plasticity networks

I show that designing a network that activates parts variably and trains them with different learning rates is a promising research direction. It could help in scaling up deep RL to multiple and more complex tasks.

Learning to search

In this article on my blog I show that exploration strategies can be learned, and propose algorithms to do so that are also consistent.

Reproducing DQN

I have one of the best performing implementations of DQN on the web. Most of the initial development was made here. I then created DRL to be able to reproduce RL papers and conduct my research in the same project.

Solve intelligence in 5 easy steps

In this article I proposed 5 key challenges to solving AI. Most notably, I informally proposed the meta-RL algorithm one month before the DeepMind and OpenAI publications. (I intentionally avoided the meta-learning terminology but the algorithm is the same)

pAInt

A fun, interactive application of style transfer. More about it here.

EDUCATION

At 16 I dropped out of school. I studied math with a private teacher for 2 years and, on my own, I learned about programing, electronics, physics, drones, etc. I then fully focused on AI, starting to work on convnets and then moving into deep RL.

SKILLS

Very self-sufficient. When I face a challenge I don't know how to solve, I find out what I need to learn and I quickly come with creative solutions.

INTERESTS

I want to work on fundamental problems of RL, like how hierarchies can be learned.

I am also interested on what tasks RL has to solve so that true intelligence can arise. Tasks that, for example, require learning language in a goal-driven manner.

PROGRAMMING LANGUAGES

C/C++, python and lua.

DL FRAMEWORKS

Tensorflow Currently doing all my research in it.

Torch

LANGUAGES

English, Catalan and Spanish.