

Review

1. Scientific / scholarly success of the project

Contribution and importance of the work to the further development of the discipline, any importance for related disciplines (transdisciplinary questions and methods), quality of the dissemination of the results (publications, activities at conferences and so on)

Comments

This project developed a number of significant theoretical results that should be of interest to the entire reinforcement learning community. While they may not have direct application, they represent improvements in efficiency and generality that bring theoretically motivated algorithms closer to practical application.

2. Development of human resources in the course of the project

Improvement of the project leader's standing in the relevant scientific community; involvement of young researchers in the project work; development of international contacts

Comments

The project produced a number of papers at top venues, which should considerably buttress the PI's CV. Two postdocs were employed and they also successfully published. A number of collaborations were established or strengthened by the project.

3. Effects of the project beyond the research field

(in the sense of applications in or impacts on social, cultural, ecological, medical, economic and / or technological areas)

Comments

There are no direct effects, as to be expected from a theoretical project. However, such theoretical work is absolutely instrumental to the long term progress of reinforcement learning, which is starting to have important industrial and commercial applications.

4. Project performance (in the sense of efficient use of available resources)

Were the goals achieved? Were the changes to the original plan sensible? What is the relation between the results obtained, the duration of the project and the resources available?

Comments

The project goals were certainly achieved and a suprisingly large number of publications at top venues were generated for such a short project with such a small team. This indicates an excellent use of resources. The work differs modestly from the original plan, but this is to be expected (and commended) as a normal part of good research.

5. Future perspectives of the research work

Should the topic be pursued or should the researchers involved be advised to switch their attention to a different area? What goals does the referee feel should be set for future work?

Comments

There are many important open questions remaining and areas for potential improvement so it makes good sense to continue in this direction. As always with theoretical work, it is important to try to strip away unrealistic assumptions to obtain algorithms that work in practical settings and yet retain strong guarantees.