Date of publication of the job offer; 15/05/20

Job Offer
PhD/Postdoctoral Position on artificial intelligence at the Computational Science Laboratory, University Pompeu Fabra, Barcelona

Job Description
Universitat Pompeu Fabra http://www.upf.edu and Prof. Gianni De Fabritiis, ICREA research professor https://es.linkedin.com/in/gdefabritiis, are looking to recruit a PhD student on the topic of applying machine learning and reinforced learning.

Lab website:
http://www.compscience.org/

Relevant References: https://scholar.google.es/citations?hl=en&user=-_kX4kMAAAAJ&view_op=list_works&sortby=pubdate

Aim:
This project aims to develop methods and applications that are transformative in the field of artificial intelligence by focusing on solving AI agent-based challenges (e.g. Unity 3D environments, but not only). The results are expected to be publishable in the highest impact scientific journals. There will be ample opportunities to present his/her work at international meetings and conferences. One example of such activity was the Unity obstacle challenge, where a player had to navigate a 3D environment solving multiple intelligence related tasks like navigation, using keys, boxes, etc. In such instance, the lab reaches second place: https://blogs.unity3d.com/2019/08/07/announcing-the-obstacle-tower-challenge-winners-and-open-source-release/
https://blogs.unity3d.com/2019/11/29/accelerating-ml-research-meet-us-at-neurips-2019/

The computational science laboratory, led by Gianni De Fabritiis has been successfully applying deep learning approaches on fundamental problems in these areas, such as protein-ligand docking, affinity prediction and protein folding, winning several international challenges. Currently, we are focused on developing intelligent agents that can outperform humans on specific problems.

Project and Institution that finance the contract
The work is supported by grant: AEI-BIO2017-82628-P (FEDER/UE) DE FABRITIIS from the Spanish Ministry of Economy (MINECO), FEDER and Agencia Estatal de Investigación sources and Acellera (www.acellera.com).
Official number reference:

AEI-BIO2017-82628-P (Aplicación de métodos de aprendizaje automático y de aumento de datos en el estudio de la conformación proteica y el reconocimiento molecular para el desarrollo de fármacos)

Skills and Experience
- The candidate will preferably have a profile in computer science, physics or mathematics. However, we seek exceptional candidates with a passion for computing, the ambition to work in very innovative projects more than specific profiles.
- The capability to think out of the box, the ambition to work in very innovative projects and very good communication skills in English.
- Previous experience in reinforcement learning and related fields, Python proficiency and coding skills, knowledge of Tensorflow or pytorch, familiarity with Linux and the ability to work with version control systems (e.g. git) are required.

Benefits of the opening
Location:
The laboratory is located in the Barcelona Biomedical Research Park which, with a privileged location on the shoreline of the Mediterranean sea, constitutes one of the most exciting interdisciplinary research centres in Southern Europe with more than 1000 scientists in the building alone.

Facilities:
Access to state of the art computational resources and large amount of simulation data, which will be crucial for the development and validation of novel computational protocols. The lab is equipped with a cluster with 60 GPUs and has exclusive access to GPUGRID.net, a distributed computing project with 5000 GPUs.
Salary:
We offer a competitive PhD salary, depending on experience.
Duration:
3-4 years

Information on the application process:
Please send an email to gianni.defabritiis@upf.edu with subject "JOB phd2" with a CV and a cover letter together with the names of up to three contacts for requesting recommendations

Deadline to submit applications –Contact: Gianni De Fabritiis

Deadline 15/6/2020