Company Description

The University of Deusto was founded in 1886 by the Society of Jesus. With campuses in Bilbao and San Sebastian and branches in Vitoria and Madrid, its hallmarks are education in skills and values, thanks to its own socially recognised teaching model. It is also characterised by its specialist research , its commitment to justice and international outreach.

Information

- Deadline: 2024-11-26
- Category: Academia
- Province: Bizkaia
- Country: Basque Country
- City: Bilbao

Company

Universidad de Deusto

Deusto

Main functions, requisites & benefits

Main functions

PhD thesis writing on "Collective Dreaming: a novel multi-agent reinforcement learning algorithm based on cooperative latent imagination" Aim: The PhD thesis should develop research on the design of an algorithm that adapts the latent imagination technique (or the more general concept of latent spaces) to a collaborative multi-agent approach, in such a way that all agents share these "imagined experiences" with each other, accelerating the collective learning process, sharing the results obtained by comparing experiences with the real world, and therefore reaching the optimal solution in less time. The outcome of the research would consist of a new algorithm that we could call "cooperative latent imagination" together with an experimental implementation of the algorithm that would allow its validation in a smart industry context, namely scenarios with multiple robots and systems working cooperatively. The main risks of the research are associated with the challenge of designing the algorithm that applies the "latent imagination" technique to carry out the learning of multiple agents in a coordinated manner, hoping that the result will converge cohesively after numerous iterations towards the optimal solution, which would be the proposed scenario. Title of the Project to be Joined: IKUR Strategy - Doctoral thesis Co-Supervision Project in the HPC&AI area. Education Department of the Basque Government. PPI and/or Project Leader: Juan-Ignacio Vazquez (Director). Pablo García Bringas (PI of the D4K Research Team). Nestor Arana (Co-Supervisor, Mondragon Unibertsitatea). Funding Entity: IKUR Strategy - Education Department of the Basque Government. We support the inclusion of people with disabilities at the University of Deusto. Therefore, we encourage you to state this condition in your application (Certificate of Disability equal to or greater than 33%). Information and Queries: Email: ayudas.fpi@deusto.es

Requisites

Qualifications Required: Master's Degree in Information Technology, Computer Science, Artificial Intelligence or similar qualifications.

Benefits

Research Contract Allocation: A maximum duration of 24 months, renewable every 12 months subject to performance evaluation. 27,262.05 €/ euros Gross Annual.