R as a PaaS cloud computing service for Computational Intelligence tasks

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Computational Intelligence (CI) is a field within Artificial Intelligence that has drawn the attention of a numerous community of researchers and practitioners. This field is concerned with computational methods inspired on nature and language and targeted for complex real-world problems for which traditional approaches are innefective or infeasible. While a number of different techniques are included within CI, a special effort is made towards their fusion and hybridization looking for systems that gather the stong points of the original components. In particular, CI hosts artificial neural networks, evolutionary algorithms, fuzzy systems and rough sets. Our group is actively involved in developing *R* packages for different heavily used CI techniques: e.g. **RSNNS**, **Rmalschains**, **frbs** and **RoughSets**.

On the other hand, Cloud Computing has emerged along last years as a new computing paradigm and is steadily gaining traction. It represents an attractive alternative for short usages of supercomputing facilities, particularly boosted by the Big Data push.

We present the advances in a new project whose objective is to develop a Platform as a Service (PaaS) in a cloud computing platform —OpenNebula is used as IaaS— which offers the computing processing capabilities of R for Big Data. This software allows the development and easy scaling of data analysis and modeling tasks based on CI techniques.

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