

Computational Intelligence and Machine Learning Virtual Infrastructure Network (CIMLVIN)

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INTRODUCTION

The role of virtual collaborative networks and communities is constantly growing. This can be attributed to the rapid growth of the internet as the main medium to distribute scientific resources, and the need to organize them. Many scientific fields have already created their virtual communities to share findings, data, methods, and other resources.

Recent years have seen numerous attempts towards the development of virtual research collaboration in CIML. Many individuals, ad-hoc groups, research teams, and national or international organizations have established their virtual presence by designing and deploying repositories or collaborative sites. The sites have often their unique scope, vision, or promote specific products, results and techniques. Despite their diversity and richness, most of these sites usually are confined to select communities, and their activities have inherent barriers. Also, none of the existing collaborative sites, offers a unifying global CIML effort.

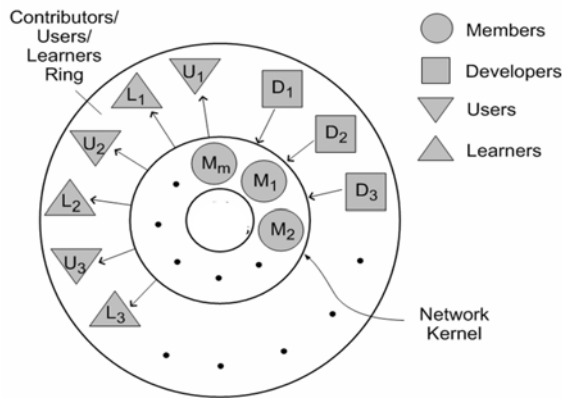


Figure 1: Interactions within the CIML Community.

BENEFITS OF THE NETWORK

The benefits of interaction within the CIMLVIN community are multifaceted and will transcend both the research boundaries and the traditional scope of CIML, and will extend beyond the community members and developers. Most important benefits will be the access to computing and educational resources for the external communities of users and learners that surround the network kernel as shown on Fig. 1.

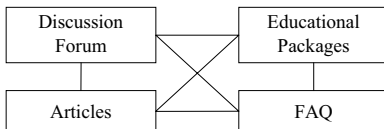


Figure 2: Computational resources provided by the portal.

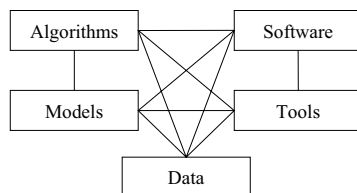


Figure 3: Communication and learning environment of the portal.

The primary objectives of the CIML network are to:

- support the advancement of universal practices in collaborative research in CIML
- offer research resources for other research areas. It should provide open source collaborative resources (Figs. 2 and 3)
- provide the forum for exchanging materials in the field
- allow communication within the community between the members, users and the public
- offer a discussion forum on topics related to the community's areas of interest
- host software, tools and data for CIML research
- to guide portal visitors through large repositories of knowledge, software and tools, and data.

PRELIMINARY PORTAL: COMPUTATIONAL INTELLIGENCE AND MACHINE LEARNING COMMUNITY

Collaboration between scattered researchers in CIML community can be made easier by its portal that will be available at URL:

www.cimlcommunity.org

Two example pages of the initial portal design are presented in Fig. 4. The first, welcome page, gives users important information about the portal and most recent news. The second page, which is used to submit software and data to the portal's repository, consists of a form that describes the author and his/her submission.

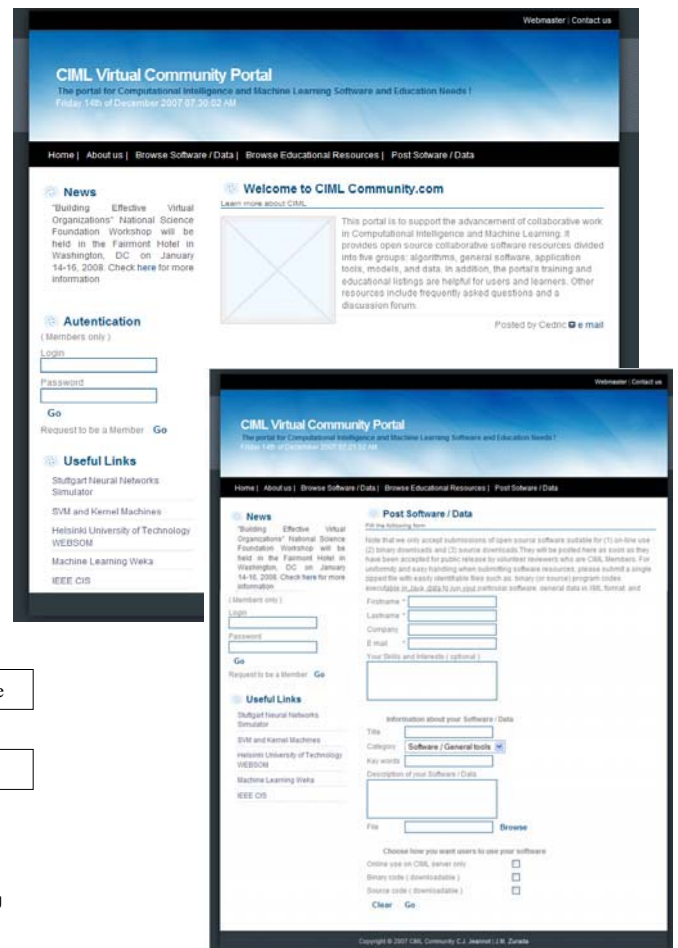


Figure 4: Initial design of two example pages of the CIML community portal.