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Recommender Systems based on Human Psychological Reputation

Maria Augusta S. N. Nunes, Stefano A. Cerri (Thesis Supervisor)

LIRMM- Laboratoire d'Informatique Robotique et Microelectronique de Montpellier
Univeristé de Montpellier II - CNRS
161, rue ADA – 34392 – Montpellier – France
{nunes, cerri}@lirmm.fr

Abstract

This short paper presents the perspectives of the PhD research¹. It is being developed in the domain of Recommenders Systems in a Social Network considering the Psychological aspects of Humans presented as a service providers.

Introduction

Recommender Systems are applications that provide personalized advice to users about products or services they might be interested in.

Recommender Systems are used to recommend products or services. In the case of services, they are produced and consumed by means of *interactions* between producers and consumers. In the context of services, we consider people not only as service consumers (users) but also as service providers [NC 2005, CGN 2005, JC 2005, LUNCKP 2004]: this is the originality of our research context. We propose a Recommender Systems to “recommend adequate people to deliver some service”. We are interested in providing personalized advice about people according to their psychological features during their previous operations in a Social Network. We consider people psychological features like personality traits, soft skills abilities, and Emotional Intelligence.

1. Recommenders Systems in Social Network

Nowadays, in Virtual Social Network there is no information about members' psychological abilities. Rather, we have experienced on the Web the availability of information about user consumed/bought products and “services” for instance by using E-commerce platforms, and also some incipient experiences of User profiles in Social Networks.

In E-commerce, we have Recommenders Systems to recommend products, like in Amazon.com (books recommended by analogy with others clients that bought similar items); or traditional services like train tickets (tickets sold if the client gives the correct information). In Social Networks, we have a User Profile developed that we can manipulate to recommend a human user as a *service provider*. However, there is no available experience on *how to recommend a human as a service provider on the basis of his/her previous performances (reputation)*.

As we said before, we decided to consider people like potential service providers. At the moment, the best technologies developed require one to enter manually the profile in order the recommender system to give some interesting suggestion about available people possessing specific skills. For instance, Buddy Finder [ZEGD 2005] allows us to find “somebody that can help us now”, to solve some specific, urgent, unforeseen problem. Buddy Finder is part of the BuddySpace [BDEST 2002] Instant Messenger tool. Both are examples of very advanced social software for enhanced presence [EKC 2004]. We are users [EKC 2005, JC 2005a] of these tools within the EU Integrated Project EleGI (www.elegi.org) where KMI (and in particular Marc Eisenstadt, the inventor of Buddyspace) are our nearest partners.

BuddyFinder find people based on their hard skills like knowledge. Our proposition offers a new perspective. We propose a Recommender System based on the reputation of people related to their

¹ Thesis Supervisors Prof. Stefano A. Cerri, Informatics - Université Montpellier II, and Ass. Professor Nathalie Blanc, Psychology - Université Montpellier III.

psychological skills [Kantrowitz 2005, Bachard 2001] as personality, emotional intelligence, and soft skills abilities.

Perspectives

According some researchers ([Goleman 1995], [Damasio 1996], and [Simon 1983]), the human psychological features influence their reasoning process and decision-making. Many of our Universities and Colleges give no importance to Emotional Intelligence and soft skills development. They do not stimulate neither propose the development of this specific literacy in their graduate courses. Even, they do not incorporate the skills development in their traditional ever pre-established courses/classes.

We chose to recommend people based on their Psychological aspects because, actually, what differentiate human *effective* work (when they provide work/service to others) are not just their cognitive abilities (hard skills [enGauge 2003]), but also emotional competences and soft skills.

The PhD research aims to design a workflow capable to capture, store, and make available user psychological information in a user profile database, which can be used by a Recommender Systems. Our first intention is to get the user information when the person is acting in his/her Social Network. The User Psychological profile contains information about user personality, emotional intelligence, and soft skills. Psychological information will be extracted during the user interaction in his/her social network. The interaction can be made by using an *Instant Messenger tool* and a *Server Database* equipped with a Reputation's workflow process control system. The last item embodies the technical innovation emerging from our research.

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