Informatics Research
Institute of Toulouse

Thursday 27 October 2016
16h00 – 17h30
ENSEEIHT, salle A001

Alberto LUMBRERAS
Team SC - IRIT (France)

Automatic Role Detection in Online Forums

Seminar

Abstract: We address the problem of detecting user roles in online discussion forums. A role may be defined as the set of behaviors characteristic of a person. In discussion forums, behaviors are primarily observed through conversations. Hence, we focus our attention on how users discuss. We propose three methods to detect groups of users with similar conversational behaviors.

Our first method for the detection of roles is based on conversational structures. We apply different notions of neighborhood for posts in tree graphs and compare the conversational patterns that they detect as well as the clusters of users with similar conversational patterns.

Our second method is based on stochastic models of growth for conversation threads. Building upon these models we propose a method to find groups of users that tend to reply to the same type of posts. We show that some groups of users (roles) with extreme behaviors have some predictive power, which allow us to make predictions of their future behaviors.

We finally present a "dual-view mixture model" that integrates the type of data used in the two previous methods (feature-based and behavioral or functional-based). The model exploits the idea that users with similar features have similar behaviors. We show that, when this is hypothesis holds, we can find clusters using fewer examples. Besides, the model is non-parametric and uses a Dirichlet Process prior to automatically assess the number of clusters.

05 61 55 65 10
info@irit.fr
www.irit.fr

Organized by
Department SI - Team SC