**Trust Relationship Prediction in Alibaba E-Commerce Platform**

**Abstract:**

This paper introduces how to infer trust relationships from billion-scale networked data to beneﬁt Alibaba ECommerce business. To effectively leverage the network correlations between labeled and unlabeled relationships to predict trust relationships, we formalize trust into multiple types and propose a graphical model to incorporate type-based dyadic and triadic correlations, namely eTrust. We also present a fast learning algorithm in order to handle billion-scale networks. Systematically, we evaluate the proposed methods on four different genres of datasets with labeled trust relationships: Alibaba, Epinions, Ciao and Advogato. Experimental results show that the proposed methods achieve signiﬁcantly better performance than several comparison methods (+1.7-32.3% by accuracy; p << 0.01, with t-test). Most importantly, when handling the real largenetworkeddatawithover1,200,000,000edges(Ali-large),ourmethodachieves2,000×speeduptoinfertrustrelationships, comparing with the traditional graph learning algorithms. Finally, we have applied the inferred trust relationships to Alibaba E-commerce platform: Taobao, and achieved 2.75% improvement on gross merchandise volume (GMV)

**SYSTEM REQUIREMENTS:**

**HARDWARE REQUIREMENTS:**

* System : Pentium Dual Core.
* Hard Disk : 120 GB.
* Monitor : 15’’ LED
* Input Devices : Keyboard, Mouse
* Ram : 1 GB

**SOFTWARE REQUIREMENTS:**

* Operating system : Windows XP/UBUNTU.
* Implementation : NS2
* NS2 Version : 2.28
* Front End : OTCL (Object Oriented Tool Command  Language)
* Tool : Cygwin (To simulate in Windows OS)