Two Postdoctoral positions at the University of Ottawa

Text Analysis and Machine Learning (TAMALE) group at the University of Ottawa is looking for TWO Postdoctoral fellows(PDFs) to work on an industrially relevant research project in the area of use of machine learning/data mining techniques to assess players playing digital games. This project is supported by the Natural Sciences and Engineering Research Council of Canada under the Idea to Innovation (I2I) program, and by i2 Learning, Inc., a provider of Digital Games Based Learning (DGBL) solutions for skills-based personnel certification and training.

Project: Data Mining for Training and Assessment Through Digital Games

The goal of this project is to develop industrial-strength data mining techniques for the use in Digital Games-Based Learning (DGBL). Specifically, we are working with our industrial partner, i2 Learning, to adapt and extend the research in Data Mining to obtain an adaptive, scalable and usable solution for assessment of the performance of DGBL users. Adaptivity means that the user will be assessed against performance profiles which are learned by our system from the logs of users at different levels of expertise. Scalability means that the learning technologies will be able to follow the growth of the user base, to meet the objectives of our business partner. Finally, usability means that the student being assessed will be provided with an understandable, specific and direct feedback on their performance. We are also addressing the key issues of data representation, data acquisition, user feedback, and the robustness and scalability of the proposed solution required for the embedding of the performance assessment component into the operational DGBL system proprietary to i2 Learning.

PDF Position 1 is devoted to model building and the acquisition of required data.
PDF Position 2 is devoted to user assessment by applying the models, and user feedback.

Successful candidates will be working at the University of Ottawa, under the supervision of Professor Stan Matwin and Senior Research Associate Dr. Jelber Sayyad Shirabad, and will be interacting with the research and development staff of i2 Learning.

These positions **require**:

- a Ph.D. in Machine Learning or Data Mining; alternatively, a Ph.D. in Artificial Intelligence with significant experience in the above fields.
- practical experience and familiarity with the methods and practices of ML and DM.
- good programming skills and interest in development of working implementations of ML/DM solutions. Significant experience with Perl and/or Java.
- good communication skills, both oral and written

An **additional asset** in applying for both positions is interest in use and design of digital games

Additional skills beneficial for applicants for Position 1: familiarity with knowledge acquisition/elicitation techniques; experience with rule-based systems.
Additional skills beneficial for applicants for Position 2: familiarity with current trends and solutions in Computer-assisted Learning Systems and e-learning.

Project duration: up to 18 months.

Remuneration: commensurate with the experience of the applicants, plus the University of Ottawa benefits package for PDFs.

Interested applicants should supply

- their CV,
- a brief statement explaining why they are excellent candidates for the position they are applying for,
- their availability dates,
- names, emails and telephone numbers of three references.

Email the above, preferably by Nov. 15, 2006, to

jsayyad@site.uottawa.ca
with the subject line
"PDF position - I2I"