

Canada's Federal Government invests in learning adaptation technology to be developed at Ryerson's LS<sup>3</sup>

The Natural Sciences and Engineering Research Council of Canada (NSERC) confirmed today (Aug 26, 2013) its support for a Semantics-Driven Learning Adaptation Framework proposed by researchers at Ryerson University in Toronto. The \$775,000 funding consists of investment by NSERC and industry partners [PetaCube Inc.](#) and [SoJo Ventures Inc.](#)

The growing demands in the global eLearning industry have led to the creation of Massive Online Open Courses (MOOCs). A decade of such practise has however demonstrated unpromising completion and success rates. The project will address this challenge by introducing an educational technology that enables adaptive personalization initiatives to enhance individual learner experience in these collective environments.

Home to Canada's state-of-the art semantic annotator, Denote, LS<sup>3</sup> will provide the expertise required to develop an open-source, intelligent, adaptive technology for MOOC by incorporating semantics into the free-form textual educational content.

The estimated 2-year project will be led by Ryerson professor, Ebrahim Bagheri, at the Laboratory for Systems, Software and Semantics (LS<sup>3</sup>). A total of twelve highly qualified personnel including MSc and PhD students will be trained in the course of the research project. The initiative will also create a postdoctoral fellow position at the department of Electrical and Computer Engineering at Ryerson for the duration of the project.

***Areas of research activity & knowledge/technology breakthrough:***

- 1) Content organization, annotation and disambiguation based on relevance to concepts and relations in Linked Open Data ontologies and knowledge bases.
- 2) Dynamic Semantics-based User Modeling to provide suggestions on how content should be selected and offered to the learners based on semantic similarity measures.
- 3) Content recommendation algorithms that estimate the interest of a learner in a subject through semantic similarity measures.

<http://www.socialjournal.net/1/post/2013/11/nserc-research-grant.html>

## **About LS<sup>3</sup>**

LS<sup>3</sup> is home to industry-sponsored and government-funded R&D projects in software engineering, quality engineering, semantic Web, linked open data, and knowledge engineering. The research in our lab provides learning opportunities for Ryerson's undergraduate and graduate students as well as visiting scientists in an exciting and dynamic environment. We assist in linking industrial research projects with expert teams within

academia to find solutions to industry challenges. We also help manage these research projects and work together to secure matching funding from government programs. Industrial partners are encouraged to contact us and explore opportunities for collaboration. Our current projects have resulted in high impact patent, publication and products for our partners. For more information, please visit <http://ls3.rnet.ryerson.ca/>