



Reliable Extraction and Meaningful Inference from Non-structured Data

Stefan Niculescu

Is your medical data lost in the shuffle?

Problem: How can your doctor or hospital discover and organize all of your medical data? Medical data comes from a lot of places in a number of different formats, and it is used by a number of people for many different purposes.

REMIND – Reliable Extraction and Meaningful Inference from Non-structured Data – is an application of machine learning techniques to medical data to holistically answer questions about individual patients. The platform provides a framework for execution of various analysis steps:

- extracting structured and unstructured data from multiple data sources belonging to a specific healthcare institution
- combining data based on domain-specific medical knowledge learned from clinical experts
- making probabilistic inferences

The result is a high-quality information repository. The REMIND platform is able to collect data from various clinical data sources such as billing, demographics, history & physical notes, lab results, and doctor's progress notes. This talk will discuss the technology as well as its application to several real world applications, including a commercial product for facilitating chart abstraction for quality reporting.

Stefan Niculescu is a Senior Staff Scientist and a Project/Product Manager at Siemens Healthcare. He has worked on the development of the REMIND application and is currently responsible for the REMIND Knowledge Management Platform. Stefan has a PhD degree in Machine Learning from Carnegie Mellon University, where he focused on incorporating domain knowledge constraints in learning of Bayesian Networks as well as on modeling of the fMRI brain signal.

Date: Thursday, March 19, 2009, 8:00 pm.
(Refreshments and networking at 7:30 pm.)
Place: Sarnoff Corp., Routes 1 and 571, Princeton, NJ
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On-line info: <http://www.acm.org/chapters/princetonacm>

All ACM / IEEE-CS meetings are open to the public. Students and their parents are welcome. There is no admission charge, and refreshments are served.

A pre-meeting dinner with the speaker is held at 6:00 p.m. at **Ruby Tuesday's Restaurant** on Route 1. Please send email to princetonacm@acm.org in advance if you plan to attend the dinner.

