

CALL FOR PAPERS

4th International Workshop on Semantic Machine Learning (SML 2017) Co-located with IJCAI 2017

Aug 19-25, 2017

Melbourne, Australia

<http://ist.gmu.edu/~hpurohit/events/sml17/>

Submissions due: May 8, 2017

Aim and Scope

Learning is an important attribute of an AI system that enables it to adapt to new circumstances and to detect and extrapolate patterns. Machine Learning (ML) has seen a tremendous growth during the last few years due in part to the successful commercial deployments in products developed by major companies such as Google, Apple and Facebook. The interest has also been fuelled by the recent research breakthroughs brought about by deep learning. ML is however not a silver bullet as it is made out to be, and currently has several limitations in complex real-life situations. Some of these limitations include: i) many ML algorithms require large number of training data that are often too expensive to obtain in real-life, ii) significant effort is often required to do feature engineering to achieve high performance, iii) many ML methods are limited in their ability to exploit background knowledge, and iv) lack of a seamless way to integrate and use heterogeneous data.

Approaches that formalize data, functional and domain semantics, can tremendously aid addressing some of these limitations. The so-called semantic approaches have been increasingly investigated by various research communities and applied at different layers of ML, e.g. modeling representational semantics in vector space using deep learning architectures, and modeling domain semantics in ontology-based ML. This is complemented by the significant body of technologies and standards put together by the Semantic Web community that not only can facilitate greater industry adoption but can also enable incorporation of reasoning and inference in ML.

This workshop will bring together researchers and practitioners from all these communities working on different aspects of semantic ML, to share their experiences, exchange new ideas as well as to identify key emerging topics and define future directions.

Topics

Research papers are invited on all aspects of Semantic Machine Learning, including but not limited to the following:

- Semantic Modelling for Machine Learning
- Semantics and Deep Learning
- Ontology-based Machine Learning
- Using Linked Open Data and other Semantic Graphs for Machine Learning
- Design, Development & Reuse of Semantic Resources for ML
- Semantic Reasoning and Inference in Machine Learning

Semantic Feature Engineering
Representational Semantics in ML
Semantics and Transfer Learning
Evolving Knowledge graph
Scalability in Semantic ML
Theory and Analysis of Semantic ML
Demos and Case Studies
Applications to Web, Social Media, Mobile, NLP, Vision, Healthcare, etc.

Work-in-progress, industry applications/experiences and position papers are also welcome. Please submit your paper using the SML 2017 EasyChair site: <https://easychair.org/conferences/?conf=sml17>

Author Instructions

Manuscripts should be prepared according to the IJCAI Author Guidelines (Go Here for Formatting Guidelines, LaTeX Styles and Word Template). Submissions must be in English and provided as a PDF file. The length of manuscripts can be upto 6 pages. Work-in-process, Demo or Position papers may be shorter in length (2-4 pages) but, if accepted, are required to be expanded to 6 pages based on reviews.

For more details: <http://ist.gmu.edu/~hpurohit/events/sml17/>

Each manuscript will be judged on its originality, significance, technical quality, relevance, and presentation. Authors are required to certify that their paper represents original work and is previously unpublished.

Submitting a paper to SML 2017 workshop means that if the paper is accepted, at least one author will register and attend the conference to present the paper.

Prospective authors are strongly encouraged to get in touch with the chairs and express their interest and seek clarifications on their queries early.

Important Dates

Paper Submission:	May 8, 2017
Author Notification:	Jun 12, 2017
Camera ready:	July 15, 2017
Workshop Date:	Aug 2017

(All deadlines are 11:59PM Hawaii time.)

Workshop Organization

Chairs

Rajaraman Kanagasabai, Institute for Infocomm Research (I2R), Singapore
Ahsan Morshed, Swinburne University of Technology, Melbourne, Australia
Hemant Purohit, George Mason University, USA

Advisory Committee

Prof. Amit Sheth, Wright State University, USA
Prof. Fausto Giunchiglia, University of Trento, Trento, Italy
Prof. Timos Sellis, Swinburne University of Technology, Australia

Program Committee

-- To be announced soon --