The Faculty of Management
The Department of Knowledge and Information Management
Invites you to attend a seminar

Intricacies in Applying Machine Learning - Some Lessons Learned

Alex Frid

Laboratory of Clinical Neurophysiology, The Rappaport Faculty of Medicine of the Technion-Israel Institute of Technology

Monday, January 15th at 12:00 pm
Jacobs Building, room no. 506

Abstract

In recent years, it has become clear that Machine Learning Techniques has passed a phase change in its abilities. What is the cause of this? How should it be applied for a specific application? In what cases can one just use a "black box" from e.g. scikit-learn/MATLAB or other standard toolboxes; or when and how does one have to think about the data?

For example, depending on the form of data; does it need "preprocessing", transformations, or can it be used "as is"? How important is feature selection and how should we do it? Can we obtain insights into the "causes" of the certain behavior of the data so that the reasons for the results of the machine learning is understandable to a human expert?

In this talk, I will discuss some recent applications using complex data where these questions arose and how we dealt with them. Specifically, I will look at EEG/ERP data, Speech Recording Data, and Neuroimaging Data; but these lessons are applicable in a broad range of applications.

No special background in machine learning will be required for the lecture.

Bio

Alex Frid is a postdoctoral fellow of Prof. David Yarnitsky, at Laboratory of Clinical Neurophysiology at the Rappaport Faculty of Medicine of the Technion-Israel Institute of Technology.

His central research at the laboratory involves application of (i) signal processing, (ii) attribute selection and (iii) machine learning methodologies in order to understand the underlying neurophysiological mechanism of neuropathic pain.

Additionally, he occasionally guides projects at The Signal and Image processing Lab (SIPL), at the faculty of Electrical Engineering at the Technion and also serves as an advisor at the Asher Space Research Institute (ASRI), the Distributed Space Systems Laboratory (DSSL) at the Technion.

All Are Welcome

Contact Email:
aweber@univ.haifa.ac.il