



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Machine Learning and Statistics Seminar

Room 1 ,Ziskind Building
on Wednesday, Jan 25, 2017
at 11:15

Amir Globerson
Tel Aviv University

Variational Conditional Probabilities

Abstract:

Predicting the label Y of an object X is a core task in machine learning. From a probabilistic perspective, this involves reasoning about conditional probabilities $p(y|x)$. However, it is hard to obtain reliable estimates for these probabilities. Here we show how to obtain lower and upper bounds on $p(y|x)$ given statistical information, and show how it can be used within various learning setups. We also extend this formulation to the structured case, where y can be multivariate.