

Theory of Learning and Kernel methods

July 29, 2017

Scope

Majority of this course is a formal introduction to **Statistical Learning Theory**, with a focus on *SVMs*. It ends with some advanced topics related to the subject. The course is suited for those working (or intending to work) in core machine learning rather than for those who wish to apply machine learning elsewhere. The course assumes knowledge of engineering level Linear Algebra, and Probability/Statistics. The lecture proceedings are typically technical with mathematical details.

Syllabus

I Basics

1. Statistical consistency. E.g., linear SVMs.
2. Kernels
3. Towards Bayesian consistency using kernels.
4. Model selection

II Advanced

1. Connections to deep networks

The main textbook for this course is [?]. Lectures discussions will be based on relevant papers as well.

Evaluation Scheme

S.No.	Exam	Weightage	Date
1	MidSem	25%	Institute specified
2	EndSem	60%	Institute specified
3	In-class evaluation	15%	All lectures

Contact

You can drop-by anytime you see me in office or know that I am in office (104, E block; phone:7020; email: saketha). No need to take any appointment. My usual office timings are 9.15am-12.45pm,1.45pm-5pm (apart from meetings/lectures).