

Abstract

The strong and weak (universal) consistency of the recursive NN-estimate and the recursive series estimate

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In the most recent presentation of this seminar recursive estimates were discussed, in particular the recursive kernel estimate and the recursive partitioning estimate. In our talk we are going to introduce two new recursive estimates that are presented in the book, the recursive NN-estimate and the recursive series estimate.

In the first part of our presentation we will discuss the definition of the recursive NN-estimate and compare it to the original k NN-estimate. We then move on to give criteria which imply weak and strong universal consistency for the recursive NN-estimate and present the main ideas that confirm the mentioned theorem.

After this we proceed with the definition of the recursive series estimate. Similar to the recursive NN-estimate we will analyse the conditions for the weak and strong consistency of the recursive series estimate. Finally we will give a quick overview of the proof, which includes several Lemmas.

In the programming part of our presentation we are going to demonstrate how to implement the recursive NN-estimate and compare it to the original k NN-estimate using the ideas given in Fabian Merles manuscript. After illustrating this with an example the audience will have the opportunity to ask further questions about the topics of the talk.