SEMIRECURSIVE ESTIMATES: A GENERAL RESULT AND THE SEMIRECURSIVE KERNEL ESTIMATE

SEMINAR TALK BY BENITA TSCHEPPE AND NATASCHA APP SUPERVISORS: PROF. DR. A. PROHL AND DR. A. CHAUDHARY $26.\ \mathrm{MAY}\ 2023$

In the first part of our presentation, we are going to discuss the definition of semirecursive estimates, give sufficient conditions for strong pointwise consistency and prove weak and strong universal consistency of semirecursive estimators.

We then go on to talk about the weak and strong universal consistency for the semirecursive kernel estimate by using the Theorems of the first part of our presentation. We will also present a quick overview of the proof. Afterwards, we clarify any questions regarding the proofs and the concept of weak and strong universal consistency.

In the programming part of the lecture, we demonstrate how to implement the semirecursive kernel estimate using Python. We will demonstrate the differences between the naive, Epanechnikov and the gaussian kernel for seperate bandwidths. Finally, we provide an opportunity for the audience to ask any further questions they have about the content of the lecture.