THE UNIVERSITY OF CHICAGO

Department of Statistics
MASTER'S THESIS PRESENTATION

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Conformal Predictive Inference for Kernel-Conditional Coverage

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ZOOM Meeting

ABSTRACT

In the conformal inference problem, the performance is measured by coverage. We focus on one natural extension of marginal coverage----kernel-conditional coverage. Like other kernel-related methods, kernel-conditional coverage includes some local properties. Pursuing kernel-conditional coverage means that we can arbitrarily set different importance on the different areas of the domain in the prediction by setting kernel centers. We proposed several methods to satisfy different requirements of kernel-conditional coverage including known kernel centers and unknown kernel centers in the prediction. The validity of all methods we proposed has been proved theoretically and empirically.