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국문 강연제목: 딥러닝에서 불확실성 정량화
영문 강연제목: Uncertainty Quantification in Deep Learning

Abstract
While deep learning has demonstrated remarkable effectiveness in predictive tasks, diagnostic applications, and decision-making processes, it is imperative to acknowledge its inherent limitations. One notable aspect pertains to its challenge in effectively handling uncertainty. Predictive uncertainty plays a critical role in identifying unreliable predictions or detecting out-of-distribution, making uncertainty quantification a promising tool for establishing trust in deep learning. In this talk, I will provide an overview of predictive uncertainty and introduce exemplary methods for quantifying it. Moreover, I will underscore the importance of uncertainty calibration, particularly in high-risk decision making systems such as biomedical field. To this end, I will introduce a predictive inference technique known as conformal prediction. Conformal prediction represents a promising distribution-free uncertainty quantification, transforming any predictor into prediction sets or intervals with a high probability of containing the true outcome.

Brief Biosketch
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