Efficient Gaussian processes to forecast food security
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Food security is commonly monitored through household
surveys, which are costly and vary in temporal frequency and spatial resolution. These surveys are increasingly difficult to implement, often disrupted or unable to achieve full geographic coverage. To address this, organizations are exploring machine learning approaches that combine survey data with auxiliary sources to estimate key indicators such as food consumption scores. We show how currently operational frequentist methods fall short in quantifying the uncertainty of these sensitive measurements, whereas the Bayesian paradigm offers a more robust and reliable framework in estimating food security conditions.