

The Extended Skew Gaussian Process for Regression

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Abstract : In this paper, we propose a generalization to the Gaussian process regression(GPR) model called the extended skew Gaussian process for regression(ESGPr) model. The ESGPR model works better than the GPR model when the errors are skewed. We derive the predictive distribution for the ESGPR model at a new input. Also we apply the ESGPR model to FOREX data and we find that it fits the Forex data better than the GPR model.

Keywords : extended skew normal distribution, Gaussian process for regression, predictive distribution, ESGPr model

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