

Galaxy parameter estimation with Bayesian Neural Networks

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Estimating galaxy shape parameters for weak lensing analysis is a complex task. It usually requires a previous deblending step in order to separate overlapped objects. Following the work we did using Variational AutoEncoders for deblending, we propose a parameter estimation algorithm based on Bayesian neural networks in order to predict posterior distribution of galaxy shapes (and potentially redshifts) from the galaxy images, whether it is blended or not. This is work in progress but I will present the first tests that we have done, applying this algorithm to DC2 images.

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