

PhotoZ estimation with Gaussian Processes

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We introduce a Gaussian processes as a possible method to estimate redshift from photometric fluxes.

Gaussian processes method is intermediate method between physically constrained SED-templates fitting methods and highly flexible unconstrained fitting method.

As for ML, it requires to be trained on a training sample, however because it encapsulates physics constraint on the cosmological Flux-Redshift relation, it needs only a reasonable number of free parameters which may be marginalized.

We have adapted the Delight code to the Vera C. Rubin observatory (in the context of RAIL).

We compare the performances of redshift estimation between the generated mock LSST data and a DC2 photoZ sample (training and evaluation datasets).

We point out the most important free parameters of the model and discuss how those can be tuned to optimize the performances.

Finally we mention the ease to combine/calibrate LSST survey with other survey having different bands.

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