

Estimating the Photometric Redshifts of Galaxies Using Regression Techniques

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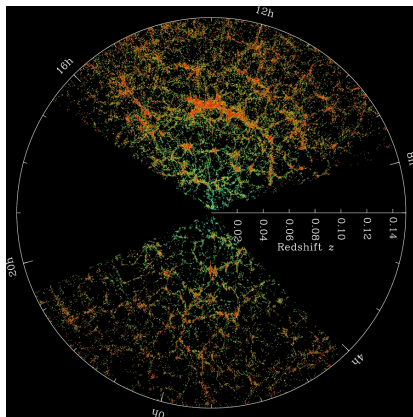
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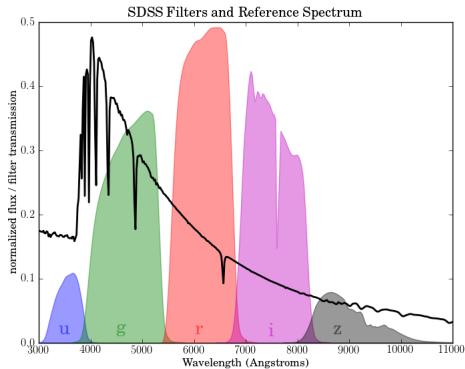
Overview

- 1 Introduction
 - Motivation
 - Spectroscopic and Photometric Redshifts
 - Machine Learning
- 2 Methodology
 - Data Preprocessing
 - Decision Tree Algorithm
 - Random Forest Algorithm
 - Validation
- 3 Literature Survey
- 4 Results and Discussion



SDSS Galaxy Map

- Possibility of Obtaining a Spectrum
- Sophisticated ML Algorithm
- Dark Energy and Dark Matter



$$\lambda_{obs} = (1 + z)\lambda_{em} \quad (1)$$

$$u = m_{ref} - 2.5 \log 10 \left[\int_0^\infty F(\lambda) S(\lambda) d\lambda \right] \quad (2)$$

Thanks For Your Attention :)