[Photometric Redshifts from SDSS Images with an Interpretable Deep Capsule Network](https://arxiv.org/abs/2112.03939)

* Dataset
  + Subset of SDSS dataset
* Model
  + Capsule networks
    - Dynamic routing algorithm
    - Three main components
      * Classification-and-encoding network
      * Class independent decoder network
      * Redshift regression network
* Downstream
  + Photometric redshift estimation
* Metrics
* Hinge loss
  + Tj represents class labels
  + M+ = .9
  + M- = .1
  + Lambda = .5
* Output of decoder network for sum of squared errors
* Squared error for redshift regression network
* For margin loss and total squared reconstruction (weighted)
* Same as above except with photo-z loss
* Photo-z evaluation metrics