Data Driven Astronomy Online Course Schedule (Draft)

Week 1

1. Python Refresher
   1. Numpy
   2. Pandas
   3. Matplotlib
   4. PyTorch Intro
2. Mean,
3. FITS Handling
4. Bin approximation

Week 2

1. Rad@Home
   1. NASA Skyview
   2. RGB Analysis
   3. RAD Facebook Page
2. 21 cm Telescope
   1. Theory
   2. Data Analysis
3. SDSS DR 14 Data Analysis
4. Proper Motion of Barnard Star

Week 3

1. Introduction to Machine Learning
2. Decision Tree Regression
3. Photometric Redshift
4. Classification

Week 4

1. Introduction to Deep Learning
2. Deep Learning using fast.ai
3. Data acquisition (SDSS Server and Kaggle datasets)
4. Star Galaxy Classifier using RESNET34
5. Morphology Classifier using RESNET34