Classification of celestial objects from research project detection.

IBM Advanced Data Science Capstone – Rubén Bélmez

USED CASE

- Open source dataset of the Sloan Digital Sky Survey (SDSS).

- SDSS measured several features of many celestial objects.
  - Brightness measurements.
  - Velocities.
  - Redshift.
  - ...

- The goal of the project is to characterized those objects.

USED CASE

- Among the many public data releases, for this project DR16 was used.

- The particular goal of this dataset is to classify each object detected into a galaxy, a star or a quasar.

DATA SET

- Among the measurements of the objects there are brightness in different bands, coordinates, some features regarding the detection, etc.

- The access to the dataset was provided by Kaggle website.

DATA SET

- Complete dataset consists of measurements for 100k objects.

- Each object is described by a total of 16 features excluding the classification label.

About this file

100 000 observations (rows) for 17 columns: 16 variables (double) and 1 additional variable (char) 'class'.

∞ objid	# ra	# dec	# u	# g
Object Identifier	J2000 Right Ascension	J2000 Declination	better of deV/Exp magnitude fit	better of deV/Exp magnitude fit
1237645942 1237680531 b	0.01 ... 360	-19.5 ... 84.5	10.6 ... 19.6	9.67 ... 20
1237663301628060000	47.3725449025	0.8206205532	18.69254	17.13867
1237673706652430000	116.3030825467	42.4559803995	18.47633	17.30546
1237671126974140000	172.7566227721	-8.7856978819	16.47714	15.31072
1237665441518260000	201.2242073319	28.7712899639	18.63561	16.88346
1237665441522840000	212.8172220469	26.6252250584	18.88325	17.87948
1237668294987420000	178.3346587911	20.7517149953	15.4468	13.88656
1237668294985060000	172.597478318	20.5527222895	19.10002	17.10998
1237668294984930000	172.3090050594	20.5811348358	16.89111	16.29741
1237669517979620000	2.1171282015	7.6637614379	17.82389	16.75859
1237658423557820000	169.1297900485	7.1525751594	17.47752	16.23605
1237658423538550000	125.0393339432	3.6427826283	19.35331	18.05971