- Activity
- on
- Classification and measurement of Data

- Rules

- Divide the strength into three groups
- Each group should have group leader
- Questions will be divided among three groups.
- Evaluation of answers should be done on paper by the other two groups.

Classify the following attributes as library, discrete, or continuous. Also classify them as qualitative or quantitative. Some cases may have more than one interpretation, so briefly indicate your reasoning if you think there may be some ambiguity.

Example: Age in years

Answer: Discrete, quantitative, ratio.

(a) Time in terms of AM or PM.
(b) Brightness as measured by a light meter.
(c) Brightness as measured by people judgments.
(d) Angles as measured in degrees between 0 to 360.
(e) Bronze, Silver and Gold medals as awarded at Olympics.
(f) Height above sea level.
(g) Number of patients in hospital.
(h) ISBN numbers for books.
(i) Ability to pass light in terms of the following values: opaque, translucent, transparent.
(j) Military rank.
(k) Distance from centre of IIT-KGP campus.
(l) Density of substance in grams per cubic centimetre.
(m) Coat check number.(when you attend an event, you can often give your coat to someone who, in turns, gives you a number that you can use to claim your coat when you leave.)

What type of data in NOIR typology are the following?

(a) Customer rating of a service with maximum score of 10.
(b) Defaulting loan amount of a customer.
(c) Jersey number of a player (to distinguish each player in a team).
(d) Duration of a movie (in minute).
(e) Answer choices for multiple-choice answers.
(f) Week days coded as 0 = Sunday, 1 = Monday, …..,6 = Saturday.
(g) Systolic blood pressure of a patient.
(h) Resolution in dots per (dpi) of printers.
(i) Branches of studies in a collage.
(j) Amount of sugar in a cup of orange juice.
(k) Number of orders of an e-com customers
(l) Wind classification as (breeze, gale, storm, and hurricane).

Identify each of the binary variables as symmetric or asymmetric:

(a) person = (left-handed, right-handed).
(b) gender = (Male, Female).
(c) diabetic = (Yes, No).
(d) frequent Flyer = (Yes, No).
(e) fever = (Yes, No).

Identify each of the following variables as discrete or continuous.

(a) Formatted capacity of a computer disk.
(b) Data transmission rate of an internet connection.
(c) Number of words per minute typed by a clerk.
(d) Foreign currency exchange rate on any day.
(e) Total spam mail received per day.
(f) Number of e-com orders from an IP address.
(g) Total score accumulated by an online game player.
(h) Calorific value of a soft drink.
(i) Odometer reading of a car.
(j) GDP of a country.

What type of variable are the following?

(a) year = {regular year, leap year}.
(b) day = {work day, weekend, holiday}.
(c) entertainment = {TV, radio, music, movies}.
(d) blood pressure = {normal, abnormal}.
(e) travel time to school.
(f) total spending on food per month.
(g) Are the following the nominal variable?
(h) geographic position = {longitude, latitude, altitude}.
(i) ENT_consultation = {ear, nose, throat}.
(j) coffee = {water, coffee powder, milk, sugar}.
(k) tea type = {light, medium, strong}.

Consider the data about all students in a course stored with the following structure:

Name	Roll No	Category*	Mark1	Mark2	Total	Grade
…	…	…	…	…	…	…
…	…	…	…	…	…	…
…	…	…	…	…	…	…

**Category denotes whether a student belongs to UG or PG*

According to NOIR classification, the attribute "Category" in Table. Q2 can be categorized as

(a) Categorical
(b) Symmetric binary
(c) Asymmetric binary
(d) Ordinal

Consider an image as an entity.
What are the attributes you should think to represent an image?
Categorize each attribute according to the NOIR data classification.
Suppose, two images are given. Give an idea to check if two images are identical or not.

Given an entity say “STUDENT” with the following attributes. Identify the NOIR category to which each of them belongs.

Scholarship amount	Name	RollNo	DoB	Aadhar No.	Gender	Mobiloe No.	Email Id