Stephen Young

DSC520-T301 2225

Week 1 Exercise

3/19/22

**GitHUB Hello-World:** <https://github.com/StephenTYoung/hello-world>

**Class Github:** https://github.com/StephenTYoung/DSC520

**Task 3:** What is the level of measurement of the following variables?

* **The number of downloads of different bands’ songs on iTunes.** – Discrete/Ratio Discrete because it is a whole number and ratio because it has a zero point and there maybe songs that have no downloads at all.
* **The names of the bands that were downloaded.** – Nominal, it is used to label attributes and pointless to do arithmetic on it
* **The position in the iTunes download chart.** – Ordinal Variable, they are an ordered list of the song
* **The money earned by the bands from the downloads.** – Ratio Variable since there is a true 0
* **The weight of drugs bought by the bands with their royalties.** – Ratio Variableweight is based on a true 0 measurement scale
* **The type of drugs bought by the bands with their royalties.** – Categorical Variable since the type of drug is a category and name define the values. This also makes it nominal since there are multiple choices but no meaningful order.
* **The phone numbers that the bands obtained because of their fame.** Nominal since there are multiple different choices and there is no meaningful arithmetic that can be done with them.
* **The gender of the people giving the bands their phone numbers.** – Binary Variable, although one could argue that sex is a binary variable, but gender is not as gender isn’t necessarily two.
* **The instruments played by the band members.** – Categorical Variable as the name of the instruments give us a name to put them in (guitar, drums, etc) and then there may be variations within (bass, acoustic, etc)
* **The time they had spent learning to play their instruments**. – Ratio Variable since it is a time interval and has a meaningful zero. Someone could have spent 0 minutes learning their instrument, however unlikely that may be.

**Task 4:** Say I own 857 CDs. My friend has written a computer program that uses a webcam to scan the shelves in my house where I keep my CDs and measure how many I have. His program says that I have 863 CDs. Define measurement error. What is the measurement error in my friend’s CD-counting device?

Measurement error is 5 CDs, I know I have 857 and the program counted 5 extra so 863-857 is 5.

**Task** **5:** Sketch the shape of a normal distribution, a positively skewed distribution and a negatively skewed distribution.

