**Visualising Data**

What is Data

When to use Line Chart, Scatter Chart

Bar Graph, Histogram, Pie Chart, Frequency Graphs

Assignment

**Characterising Data (Descriptive Statistics)**

Measure of Central Tendency

Measure of Dispersion

Measure of Association

Skewness

Probability Basics

Uniform Distribution

Binomial Distribution

Standard Normal Distribution

**Predicting from Data (Inferential Statistics)**

Sampling Technique-Random Sampling,Stratified Sampling

Hypothesis Testing

Central Limit Theorem

Estimating Population Parameters

P values, Type 1 and Type 2 Errors

Assignment

**Craft your Data**

Data Collection Techniques

Data Cleaning and Preparation (Raw to Processed)

Assignment

Explain the central limit theorem

How would you describe a 'p-value

What is sampling?

What is the normal distribution?

What is bias in data science?

Where is inferential statistics and where used with example?

Q3. Difference between population and sample with example.

What does standard deviation mean?

What is an outlier?

What is the confidence interval?

Describe hypothesis testing

What are descriptive statistics?

What are left-skewed and right-skewed distributions

What is the binomial distribution formula?

How do data scientists use statistics

<https://365datascience.com/career-advice/job-interview-tips/probability-and-statistics-interview-questions-for-data-scientists/>

* Q1: Explain the central limit theorem and give examples of when you can use it in a real-world problem?
* Q3: Describe briefly the hypothesis testing and p-value in layman’s term? And give a practical application for them?
* Q4: Given a left-skewed distribution that has a median of 60, what conclusions can we draw about the mean and the mode of the data?
* Q8: Say you flip a coin 10 times and observe only one head. What would be the null hypothesis and p-value for testing whether the coin is fair or not?
* Q9: You are testing hundreds of hypotheses, each with a t-test. What considerations would you take into account when doing this?
* Q10: What general conditions must be satisfied for the central limit theorem to hold?
* Q13: Discuss the Chi-square, ANOVA, and t-test
* Q15: What is the relationship between the significance level and the confidence level in Statistics?
* Q18: What are the differences between the z-test and t-test?
* Q19: When to use a z-test Vs a t-test?
* Q20: Given a specific dataset, how do you calculate t-statistic or z-statistics?