

# Statistics

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## How to Learn Statistics for Data Science As A Self Starter

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### Basics Stats

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#### Probability

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1. Introduction to Basic Terms
  2. Variables
  3. Random Variables
  4. Population, Sample, Population Mean, Sample Mean
  5. Population Distribution, Sample Distribution and Sampling Distribution
  6. Mean, Median, Mode
  7. Range
  8. Measure Of Dispersion
  9. Variance
  10. Standard Deviation
  11. Gaussian/Normal Distribution
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### Intermediate Stats

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12. Standard Normal Distribution
13. Z score
14. Probability Density Function
15. Cumulative distribution function
16. Hypothesis Testing
17. Many different plotting graphs
18. Kernel Density Estimation
19. Central Limit Theorem
20. Skewness of Data
  - Covariance

- Pearson Correlation Coefficient
- Spearman Rank Correlation Coefficient
- Importance of Correlation
- Hypothesis Testing
- Null Hypothesis
- Alternative Hypothesis
- Understanding Hypothesis testing
- (T-test, Chi square test, p values)

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## Advanced Stats

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- 21. Q-Q plot
  - 22. Chebyshev's inequality
  - 23. Discrete And Continuous Distribution
  - 24. Bernoulli And Binomial Distribution
  - 25. Log Normal Distribution
  - 26. Power Law Distribution
  - 27. Box Cox Transform
  - 28. Poisson Distribution
  - 29. Application Of Non Gaussian Distribution
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