

Stats For Data Science Outline

Week 1

1. Day 1:

- Slides_01a_Introduction_to_Statistics.pdf
- Slides_01b_What_is_Data.pdf
- Notebook_01_Exploratory_Data_Analysis_Part_1_Single_Variable.ipynb (through measures of central tendency)

2. Day 2:

- Notebook_01_Exploratory_Data_Analysis_Part_1_Single_Variable.ipynb (measures of spread to end)
- Exercise_01_Single-Variable_EDA.pdf

Week 2

1. Day 1:

- Review Exercise_01
- Notebook_02_Exploratory_Data_Analysis_Part_2_Two_Variable.ipynb
- Exercise_02_Multi-Variable_EDA.pdf

2. Day 2:

- Slides_02_Probability_Part_1_Basics_to_Conditional.pdf
- Start Slides_03_Probability_Part_2_Random_Variables.pdf, if time allows

Week 3

1. Day 1:

- Review Exercise_02
- Finish Slides_03_Probability_Part_2_Random_Variables.pdf
- Notebook_03_Probability_Calculations_Binomial_Normal.ipynb
- Exercise_03_Probability.pdf

2. Day 2:

- Slides_04a_Estimation_Part_1.pdf
- Demonstration: demonstrations/Confidence Interval Demo.ipynb
- Notebook_04a_Estimation_Part_1.ipynb
- Exercise_04_Estimation.pdf (Part 1)

Week 4

1. Day 1:

- Review Exercise 03
- Slides_04b_Part_2_Estimation_Cautions.pdf
- Slides_04c_Estimation_Part_3 .pdf
- Demonstration: demonstrations/Bootstrap_Confidence.Interval_Demo.ipynb
- Notebook_04b_Estimation_Part_2_The_Bootstrap.ipynb
- Exercise_04_Estimation.pdf (Part 2)

2. Day 2:

- Slides_05a_Hypothesis_Testing_01_Introduction.pdf
- Notebook_05a_Hypothesis_Testing_Part_1.ipynb
- Exercise_05_Hypothesis_Testing.pdf Parts 1 and 2

Week 5

1. Day 1:

- Review Exercises 04
- Slides_05b_Part_2_A_B_Testing.pdf
- Slides_05c_Hypothesis_Testing_02_Permutation_Tests.pdf
- Notebook_05b_Hypothesis_Testing_Part_2_Permutation_Tests.ipynb
- Notebook_05c_Hypothesis_Testing_Part_3_Effect_Size.ipynb
- Exercise_05_Hypothesis_Testing.pdf Parts 3 and 4

2. Day 2:

- Slides_06_Linear_Regression.pdf
- Notebook_06a_Linear_Regression.ipynb
- Exercise_06_Linear_and_Logistic_Regression.pdf Part 1

Week 6

1. Day 1:

- Review Exercise 05
- Notebook_06b_Logistic_Regression.ipynb
- Exercise_06_Linear_and_Logistic_Regression.pdf Part 2

2. Day 2:

- Review Exercise 06
- Assessment