

Stats For Data Science Outline

Week 1

1. Day 1:

- Welcome to Class and Introduction to Slack (**Mary**)
- Slides_01a_Introduction_to_Statistics.pdf (**Michael**)
- Slides_01b_What_is_Data.pdf (**Michael**)
- Notebook_01_Exploratory_Data_Analysis_Part_1_Single_Variable.ipynb (through measures of central tendency) (**Mahesh**)

2. Day 2:

- Notebook_01_Exploratory_Data_Analysis_Part_1_Single_Variable.ipynb (measures of spread to end) (**Michael**)
- Exercise_01_Single-Variable_EDA.txt

Week 2

1. Day 1:

- Review Exercise_01 (**Michael**)
- Notebook_02_Exploratory_Data_Analysis-Part_2_Two_Variable.ipynb (**Mahesh**)
- Exercise_02_Multi-Variable_EDA.txt

2. Day 2:

- Slides_02_Probability_Part_1_Basics_to_Conditional.pdf (**Michael**)
- Start Slides_03_Probability_Part_2_Random_Variables.pdf, if time allows (**Mary**)

Week 3

1. Day 1:

- Review Exercise 02 (**Mahesh**)
- Finish Slides_03_Probability_Part_2_Random_Variables.pdf (**Mary**)
- Notebook_03_Probability_Calculations_Binomial_Normal.ipynb (**Michael**)
- Exercise_03_Probability.txt

2. Day 2:

- Slides_04a_Estimation_Part_1.pdf (**Michael**)
- Demonstration: demonstrations/Confidence.Interval.Demo.ipynb (**Michael**)

- Notebook_04a_Estimation_Part_1.ipynb (**Mary**)
- Exercise_04_Estimation.txt (Part 1)

Week 4

1. Day 1:

- Review Exercise 03 (**Mary**)
- Slides_04b_Part_2_Estimation_Cautions.pdf (**Mahesh**)
- Slides_04c_Estimation_Part_3.pdf (**Mahesh**)
- Demonstration: demonstrations/Bootstrap_Confidence_Interval_Demo.ipynb (**Mahesh**)
- Notebook_04b_Estimation_Part_2_The_Bootstrap.ipynb (**Michael**)
- Exercise_04_Estimation.txt (Part 2)

2. Day 2:

- Slides_05a_Hypothesis_Testing_01_Introduction.pdf (**Mary**)
- Notebook_05a_Hypothesis_Testing_Part_1.ipynb (**Michael**)
- Exercise_05_Hypothesis_Testing.txt Parts 1 and 2

Week 5

1. Day 1:

- Review Exercises 04 (**Mary**)
- Slides_05b_Part_2_A_B_Testing.pdf (**Mary**)
- Slides_05c_Hypothesis_Testing_02_Permutation_Tests.pdf (**Michael**)
- Notebook_05b_Hypothesis_Testing_Part_2_Permutation_Tests.ipynb (**Michael**)
- Notebook_05c_Hypothesis_Testing_Part_3_Effect_Size.ipynb (**Mahesh**)
- Exercise_05_Hypothesis_Testing.txt Parts 3 and 4

2. Day 2:

- Slides_06_Linear_Regression.pdf (**Mahesh**)
- Notebook_06a_Linear_Regression.ipynb (**Michael**)
- Exercise_06_Linear_and_Logistic_Regression.txt Part 1

Week 6

1. Day 1:

- Review Exercise 05 (**Mahesh**)
- Notebook_06b_Logistic_Regression.ipynb (**Michael**)
- Exercise_06_Linear_and_Logistic_Regression.txt Part 2

2. Day 2:

- Review Exercise 06 (**Michael**)
- Assessment