



SUMMER ANALYTICS 2020



“Raw ores need some processing before they are finished into fine minerals, so do Data!”

Exploratory Data Analysis or EDA is that important processing step that can drive data to confess some facts we can't comprehend with just a glance.

Summer Analytics aims to deliver a first hand learning experience to essential skills like EDA to its participants. Hence, owing to the immense importance of EDA, we are introducing an extra day in Week 2.

You'll be going through an open and free course on Statistical Reasoning for in-depth experience on EDA and then reviewing a Kaggle notebook that uses the above gained experience to perform EDA on the titanic dataset.

Task 1 : Register and complete [this](#) course till **UNIT 2: Exploratory Data Analysis.**
(Check registration steps below)

Task 2 : Study [this](#) tutorial for getting an intro to **Seaborn - A data visualization library**
(Seaborn is used in the below attached Kaggle Notebook)

Task 3 : Study the attached **Kaggle Notebook** [here](#)

Registration Steps for Task 1 :


- Visit this link - <https://oli.cmu.edu/courses/statistical-reasoning-copy/> and click on **ENTER OPEN & FREE COURSE** button.

The screenshot shows a web browser window with the URL <https://oli.cmu.edu/courses/statistical-reasoning-copy/>. The page has a blue header with the breadcrumb "Home > Products > Statistical Reasoning — Open & Free". Below the header, the title "Statistical Reasoning — Open & Free" is displayed in blue. The main content area contains a description of the course: "Introductory-level course teaches students the basic concepts of statistics and the logic of statistical reasoning. Designed for students with no prior knowledge in statistics, its only prerequisite is basic algebra. Learn about Open & Free OLI courses by visiting the 'Open & Free features' tab below." A green button labeled "ENTER OPEN & FREE COURSE" is prominently displayed. Below the button, the categories "Data Science and Causal Reasoning (independent learners), Mathematics and Logic (independent learners)" are listed. At the bottom, there is a section titled "Description" with a sub-header "What students will learn".

- Click on **Sign Up** link

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To join this Open and Free course, please sign in:

Account ID

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or
sign up for an Independent Learner account
[Sign Up](#)

You are registering for
Statistical Reasoning (Open + Free)
Enter Without an Account

You can use our courses without an account, but your work will not be saved.


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ENTER COURSE

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- Fill in the details, Institute's name is an optional field.

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First (Given) Name:

Last (Family) Name:

Email Address:


Country:

Full Institution Name: Optional for students

Choose Account ID: Use your email address or choose a name.


Choose Password: 6 to 32 Characters, Case Sensitive

Confirm Password:

☐ I'm not a robot 
SIGN UP **RESET**

You are registering for
Statistical Reasoning (Open + Free)
Enter Without an Account

You can use our courses without an account, but your work will not be saved.

☐ I'm not a robot 
ENTER COURSE

- Click on **Confirm Account**

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Confirm Your Account Information

First (Given) Name: Gaurav
Last (Family) Name: Agarwal
Email Address: agarwalgauravjr@gmail.com
Country: India
Full Institution Name:
Account ID: agarwalgauravjr@gmail.com


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- Choose **I Agree** and click **Submit**

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My Courses Help Hello, Gaurav [sign out]

Welcome to OLI! Your account has been created.

**Carnegie Mellon University
Open Learning Initiative
Online Consent Form**

I agree to participate in the on-line course research conducted by Norman Bier and his colleagues under the supervision of Norman Bier. I understand that the proposed research has been reviewed by the University of Pittsburgh Human Subjects Review Board. I understand that my participation is completely voluntary, and I will not receive course credit or any other compensation from Carnegie Mellon for my participation in this research. I understand that I have the right to withdraw from the study at any time without penalty by selecting "opt out from research" on "my OLI home" page.

Purpose of the Study: I know that the researchers are studying how students learn in an online educational environment and that the study is directed at improving the course material, not judging my behavior. The researchers will produce design recommendations to improve future versions of the courses. I understand that my interactions with the on-line course will be logged in a data file and that these logs and the data will be used as data for this study. The only difference between agreeing to participate in the study and not agreeing to participate in the study is that if I agree to participate, my log file will be retained as data for this study and if I do not agree to participate, my log file will not be retained.

Privacy: I understand that the following procedure will be used to maintain my anonymity in analysis and publication / presentation of any results. Each participant will be assigned an ID; names will not be logged. The researchers will save the data using this participant ID. Only registered OLI researchers will have access to the logged data for analysis purposes. The servers containing the log files are in locked secure room.


I understand the nature of this Study. I am at least 18 years of age and agree to participate. I can view a copy of this consent form at any time by selecting the "Research Consent Form" link on the "my OLI home" page. I give the researchers permission to present this work in written and/or oral form for teaching or presentations to advance the knowledge of science and/or academia, without further permission from me provided that my identity is not disclosed.

☒ I Agree
 ☐ I Disagree
 [SUBMIT](#)

- Click on **Visit Course** to go to the course.

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You have joined this Open & Free course. To access course materials, click Visit Course.

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My Academic Courses What's this?


Register for a course: **GO**

If your instructor has provided you with a Course Key, enter it above to register for their course.

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WORK DONE IN OPEN & FREE COURSES WILL NOT BE SEEN BY ANY INSTRUCTORS


Statistical Reasoning (Open + Free)  Remove

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- Complete till **UNIT 2: Exploratory Data Analysis**

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Syllabus My Scores

Before you begin, [Test and Configure](#) your system for use with this course.

Introduction to Statistics	
Assignment	Status
UNIT 1: Introduction	
Module 1: Introduction (Available Practice)	
Module 2: Learning Strategies (Available Practice)	
Module 3: The Big Picture (Available Practice)	
UNIT 2: Exploratory Data Analysis	
Module 4: Examining Distributions (Available Practice)	
Module 5: Examining Relationships (Available Practice)	
UNIT 3: Producing Data	
Module 6: Sampling (Available Practice)	
Module 7: Designing Studies (Available Practice)	
UNIT 4: Probability	
Module 8: Introduction (Probability)	