

Data Science Fall 2018

Homework 1

Author: Faizan Saeed
Email: MSDS17005@itu.edu.pk

Instructions:

- The aim of this homework is to give you an intro to EdX courses and understanding of python, jupyter notebook, numpy, pandas and matplotlib.
 - Homework-1 is divided in two deliverables:
Deliverable-1A and Deliverable-1B.
 - Deliverable-1A is due on 13-09-2018
 - Deliverable-1B is due on 20-09-2018
 - Only use valid ITU Email Address
 - Discussion among students is allowed but the deliverable of the assignment should be individual.
 - There will be no extension in time and no late submission will be accepted.
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Step 1

Please make sure you have a valid itu email id i.e. *MSDS18###*. If you do not have one, please contact IT office and set it up as soon as possible.

Step 2

Using your ITU Email Address register with EdX.



Already have an edX account? [Sign in.](#)

Create an account using



Facebook



Google



Microsoft

or create a new one here

Email

Full Name

Public Username (required) !

Password (required) !

Country or Region of Residence

By creating an account with edX, you agree to abide by our edX [Terms of Service and Honor Code](#) and agree to our [Privacy Policy](#).

☐ Support education research by providing additional information

Create Account

Step 3

After you have successfully created your account, log into the edX platform. Go to the search bar and type “Python for Data Science”. Select the one being offered by “UCSanDiegoX”.


The screenshot shows the edX homepage with a navigation bar at the top containing links for Courses, Programs & Degrees, Schools & Partners, and About. A search bar in the top right corner contains the text "python for data science". Below the search bar, a dropdown menu lists search results under the heading "Courses". The first result, "Python for Data Science UCSanDiegoX", is highlighted in blue. Other results include "Introduction to Python for Data Science Microsoft" and "Programming with Python for Data Science Microsoft". A link "VIEW ALL RESULTS FOR python for data science" is also present. The main content area features the text "Accelerate your future. Learn anytime, anywhere." and a "Find courses" button. At the bottom, there is a footer with logos for various partner institutions: MIT, Massachusetts Institute of Technology, Harvard University, Berkeley University of California, The University of Texas System, The Hong Kong Polytechnic University, and The University of British Columbia.

Step 4

Press the “Enroll Now” button to audit this course. Do not opt for the paid mode, you can freely audit this course without any charges after enrolling in this course.

 [Courses](#) ▾ [Programs & Degrees](#) ▾ [Schools & Partners](#) [About](#) ▾ faizan_saeed ▾

[Home](#) > [All Subjects](#) > [Computer Science](#) > [Python for Data Science](#)



Python for Data Science

Learn to use powerful, open-source, Python tools, including Pandas, Git and Matplotlib, to manipulate, analyze, and visualize complex datasets.


[UC San Diego](#)

Self-Paced

Enroll Now

☐ I would like to receive email from The University of California, San Diego and learn about other offerings related to Python for Data Science.

This course is part of a

 **MicroMasters®**

About this course

In the information age, data is all around us. Within this data are answers to compelling questions across many societal domains (politics, business, science, etc.). But if you had access to a large dataset, would you be able to find the answers you seek?

🕒 Length: 10 weeks

👤 Effort: 8 to 10 hours per week

💰 Price: FREE

Step 5

The course is divided into 10 weeks. By clicking each week, you can view the videos, quizzes and assignments of that week.

[Course](#) [Discussion](#) [Wiki](#) [Progress](#)

Python for Data Science

[Resume Course](#)

[Expand All](#)

- Introduction and Course Information
- Week 1: Getting Started with Data Science
- Week 2: (Optional) Background in Python and Unix
- Week 3 - Jupyter Notebooks and Numpy
- Week 4 - Pandas
- Week 5 - Data Visualization
- Week 6 - Mini Project Week
- Week 7 - Introduction to Machine Learning
- **Week 8 - Working with Text and Databases**
- Week 9 - Final Project Part 1
- Week 10 - Final Project Part 2

Course Tools

- 🔖 Bookmarks
- 📅 Updates

Important Course Dates

Course End
9 months ago - Dec 19, 2017

This course is archived, which means you can review course content but it is no longer active.

Today is Sep 6, 2018 12:13 PKT

Course Handouts

[Course Syllabus](#)

Once you have seen a video, press the “Mark As Complete” button.

Transcripts
[Download SubRip \(.srt\) file](#)
[Download Text \(.txt\) file](#)

If you try to access rows of a 3-by-3 numpy array called “arr” using the command: `arr[2,]` How many rows will be returned?

RESULTS

☐ 2

70%

☒ 3

15%

☐ IndexError: index out of bounds

8%

☐ 1

7%

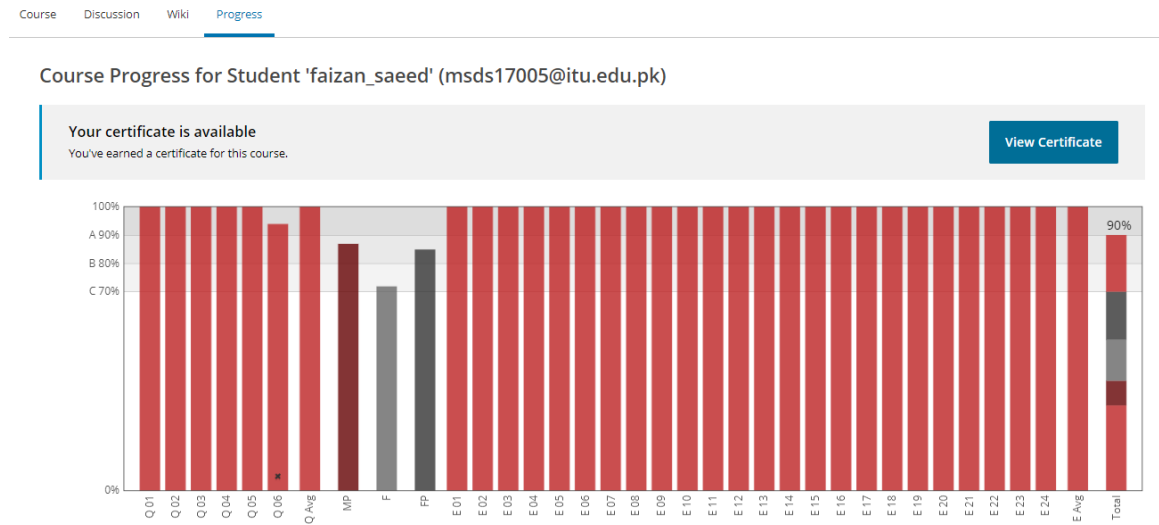
Submit

Results gathered from 7294 respondents.

Mark as complete

Deliverable-1A

Your first deliverable would be to complete the first 3 weeks of the course i.e **Week 1, 2, and 3**. You can see the progress of your work by going to the tab called “Progress”.



The red bars correspond to your level of completion. Since, I have completed this course, all bars are almost red. You need to submit a screen-shot of this bar chart with your name clearly being visible. You should save the file with the name “Your_Student_ID.png” e.g. “MSDS18###.png”.

Deliverable-1B

Your second deliverable would be to complete **Week 4, 5 and 7** . Similar to the first deliverable you would have to submit your latest progress for the course in similar format.

Please skip “Week 6 - Mini Project Week”.

➤	Introduction and Course Information
➤	Week 1: Getting Started with Data Science
➤	Week 2: (Optional) Background in Python and Unix
➤	Week 3 - Jupyter Notebooks and Numpy
➤	Week 4 - Pandas
➤	Week 5 - Data Visualization
▼	Week 6 - Mini Project Week
➤	Get Credit for Your Work
➤	Practice Proctored Exam None
➤	Mini Project Engagement
➤	Mini Project Submission MiniProject
➤	Week 7 - Introduction to Machine Learning
➤	Week 8 - Working with Text and Databases
➤	Week 9 - Final Project Part 1

We expect that you would complete your work honestly.