

How to make a project in Anaconda

By Muhammad Tahoor Khalid (L1F13BSCS2634)

1. Download Anaconda from this site. <https://www.continuum.io/downloads>
2. After downloading, install anaconda in your laptop / PC.
3. Once install, go to the installed directory and run “Anaconda Navigator”.

Name	Date modified	Type	Size
Anaconda Cloud	4/2/2017 5:29 PM	Shortcut	2 KB
Anaconda Navigator	4/2/2017 5:29 PM	Shortcut	3 KB
Anaconda Prompt	4/2/2017 5:29 PM	Shortcut	3 KB
IPython	4/2/2017 5:29 PM	Shortcut	2 KB
Jupyter Notebook	4/2/2017 5:29 PM	Shortcut	3 KB
Jupyter QtConsole	4/2/2017 5:29 PM	Shortcut	2 KB
Reset Spyder Settings	4/2/2017 5:29 PM	Shortcut	2 KB
Spyder	4/2/2017 5:29 PM	Shortcut	2 KB

4. Click on “Environments”.

The screenshot shows the Anaconda Navigator desktop application. The interface includes a top navigation bar with 'File' and 'Help' menus, the 'ANACONDA NAVIGATOR' logo, and buttons for 'Upgrade Now' and 'Sign in to Anaconda Cloud'. A left sidebar contains navigation options: Home, Environments (highlighted with a blue arrow), Projects (beta), Learning, and Community. The main workspace displays a grid of application tiles under the heading 'Applications on root Channels'. The tiles include: Jupyter Notebook (4.3.1) with a 'Launch' button; QtConsole (4.2.1) with a 'Launch' button; Spyder (3.1.2) with a 'Launch' button; Anaconda Fusion (1.0.2) with an 'Install' button; Glueviz (0.9.1) with an 'Install' button; and RStudio (1.0.136) with an 'Install' button. Each tile provides a brief description of the application's capabilities.

5. Click on “create

File Help

ANACONDA NAVIGATOR Upgrade Now Sign in to Anaconda Cloud

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root

iml

Created

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Import

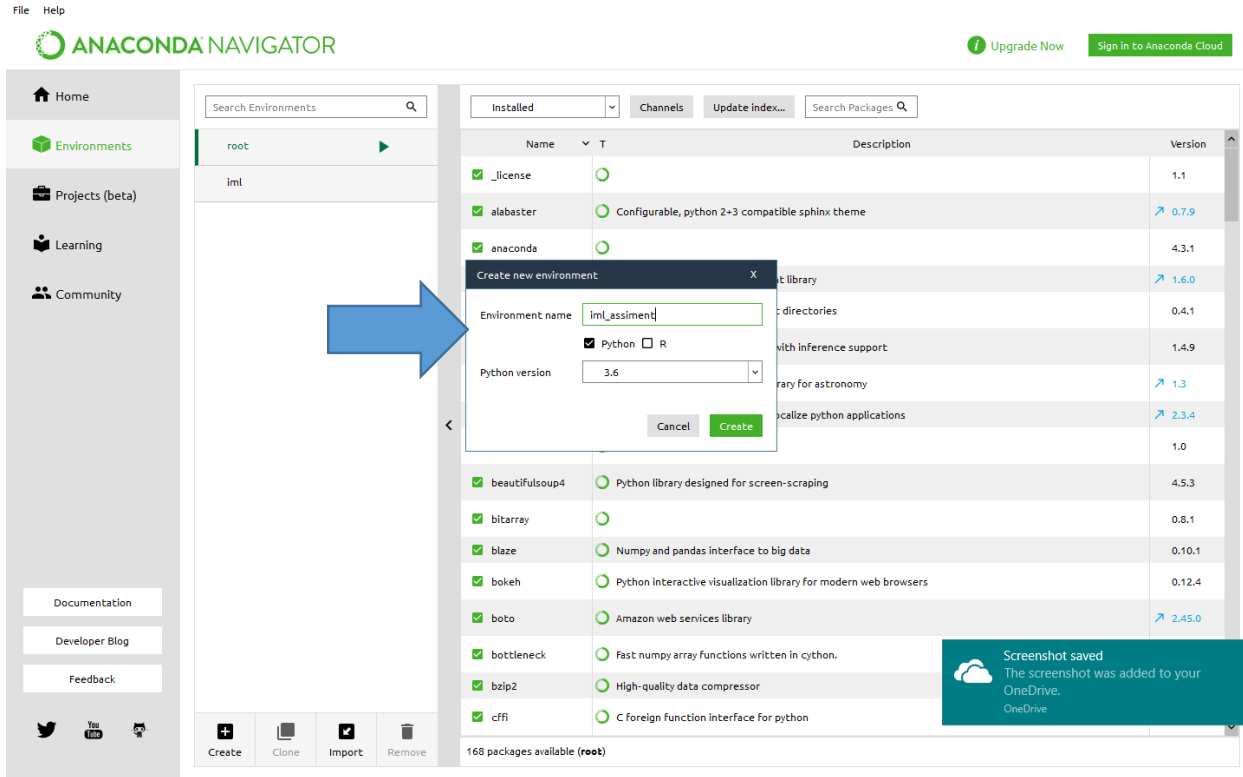
Remove

Installed Channels Update index... Search Packages

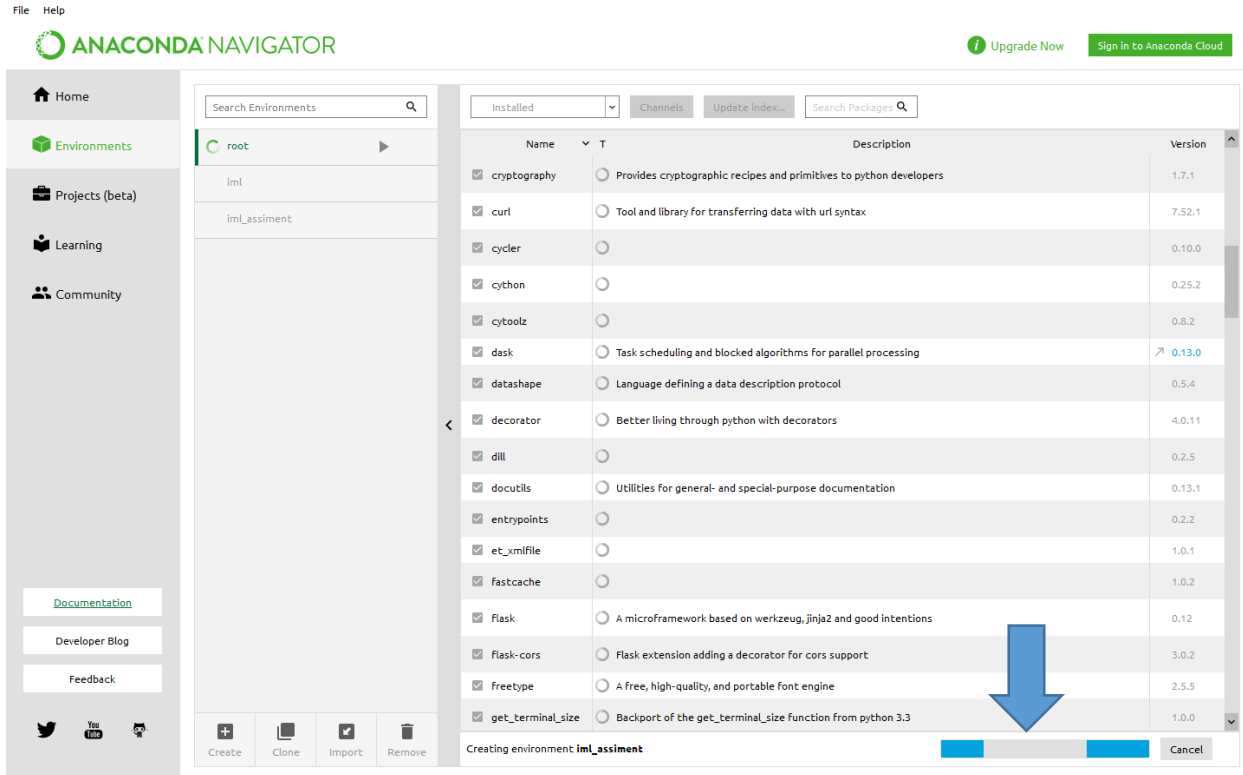
Name	T	Description	Version
<input checked="" type="checkbox"/> _license	<input type="radio"/>		1.1
<input checked="" type="checkbox"/> alabaster	<input type="radio"/>	Configurable, python 2+3 compatible sphinx theme	0.7.9
<input checked="" type="checkbox"/> anaconda	<input type="radio"/>		4.3.1
<input checked="" type="checkbox"/> anaconda-client	<input type="radio"/>	Anaconda.org command line client library	1.6.0
<input checked="" type="checkbox"/> anaconda-project	<input type="radio"/>	Reproducible, executable project directories	0.4.1
<input checked="" type="checkbox"/> astroid	<input type="radio"/>	Abstract syntax tree for python with inference support	1.4.9
<input checked="" type="checkbox"/> astropy	<input type="radio"/>	Community-developed python library for astronomy	1.3
<input checked="" type="checkbox"/> babel	<input type="radio"/>	Utilities to internationalize and localize python applications	2.3.4
<input checked="" type="checkbox"/> backports	<input type="radio"/>		1.0
<input checked="" type="checkbox"/> beautifulsoup4	<input type="radio"/>	Python library designed for screen-scraping	4.5.3
<input checked="" type="checkbox"/> bitarray	<input type="radio"/>		0.8.1
<input checked="" type="checkbox"/> blaze	<input type="radio"/>	Numpy and pandas interface to big data	0.10.1
<input checked="" type="checkbox"/> bokeh	<input type="radio"/>	Python interactive visualization library for modern web browsers	0.12.4
<input checked="" type="checkbox"/> boto	<input type="radio"/>	Amazon web services library	2.45.0
<input checked="" type="checkbox"/> bottleneck	<input type="radio"/>	Fast numpy array functions written in cython.	1.2.0
<input checked="" type="checkbox"/> bzip2	<input type="radio"/>	High-quality data compressor	1.0.6
<input checked="" type="checkbox"/> cffi	<input type="radio"/>	C foreign function interface for python	1.9.1

168 packages available (root)

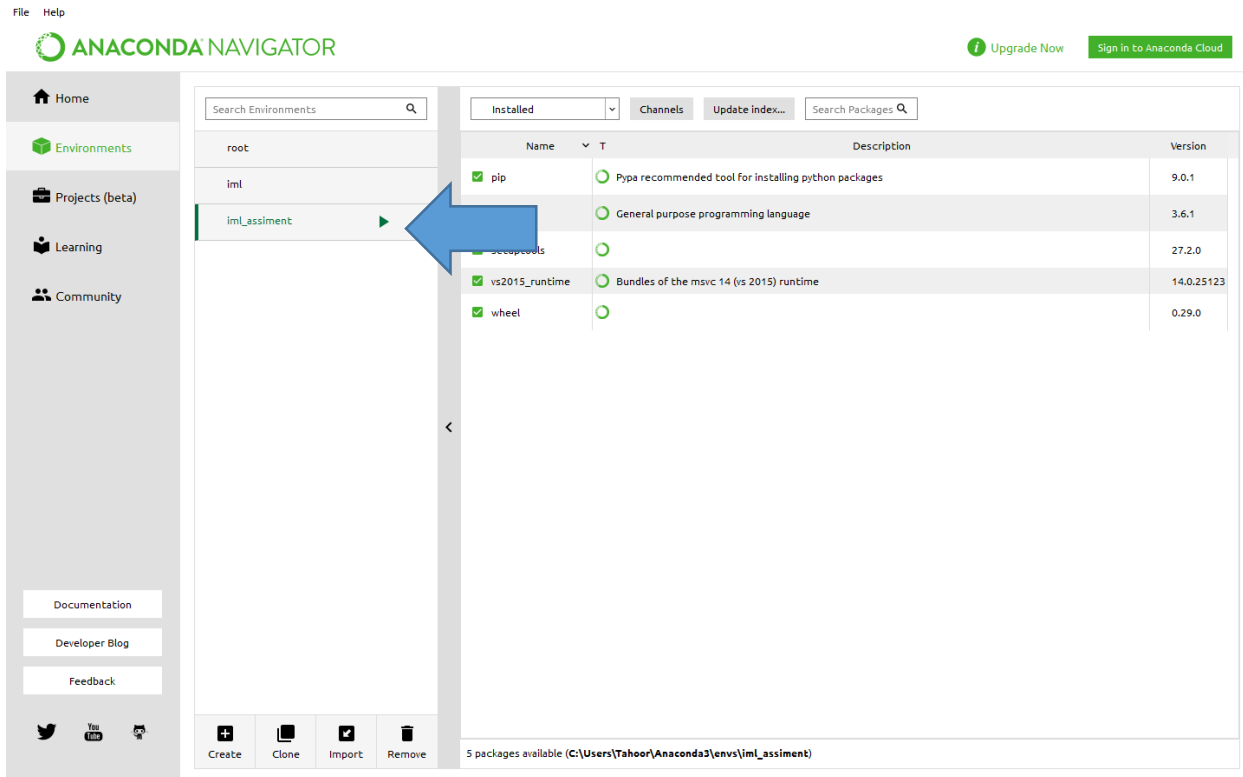
6. Enter a name for new environment and click on “create”. Keep Python version 3.6 and python checked.



7. Wait until it creates environment.



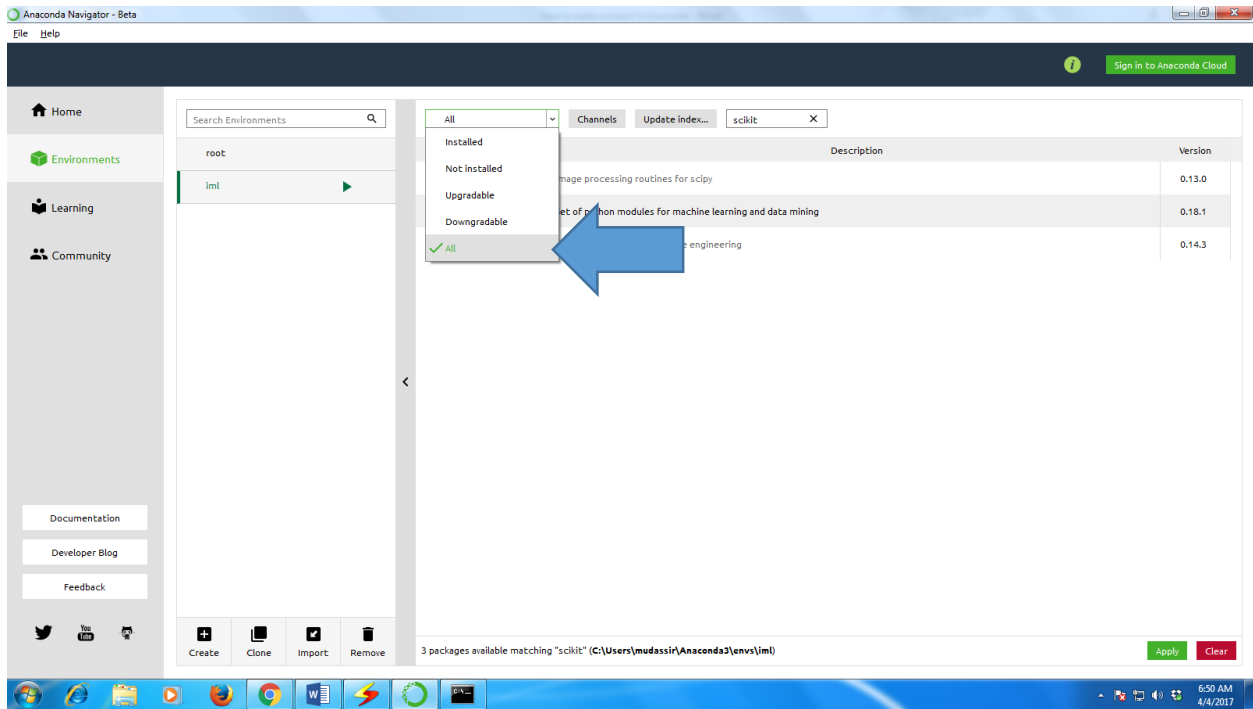
8. Once environment is created it will look like this.



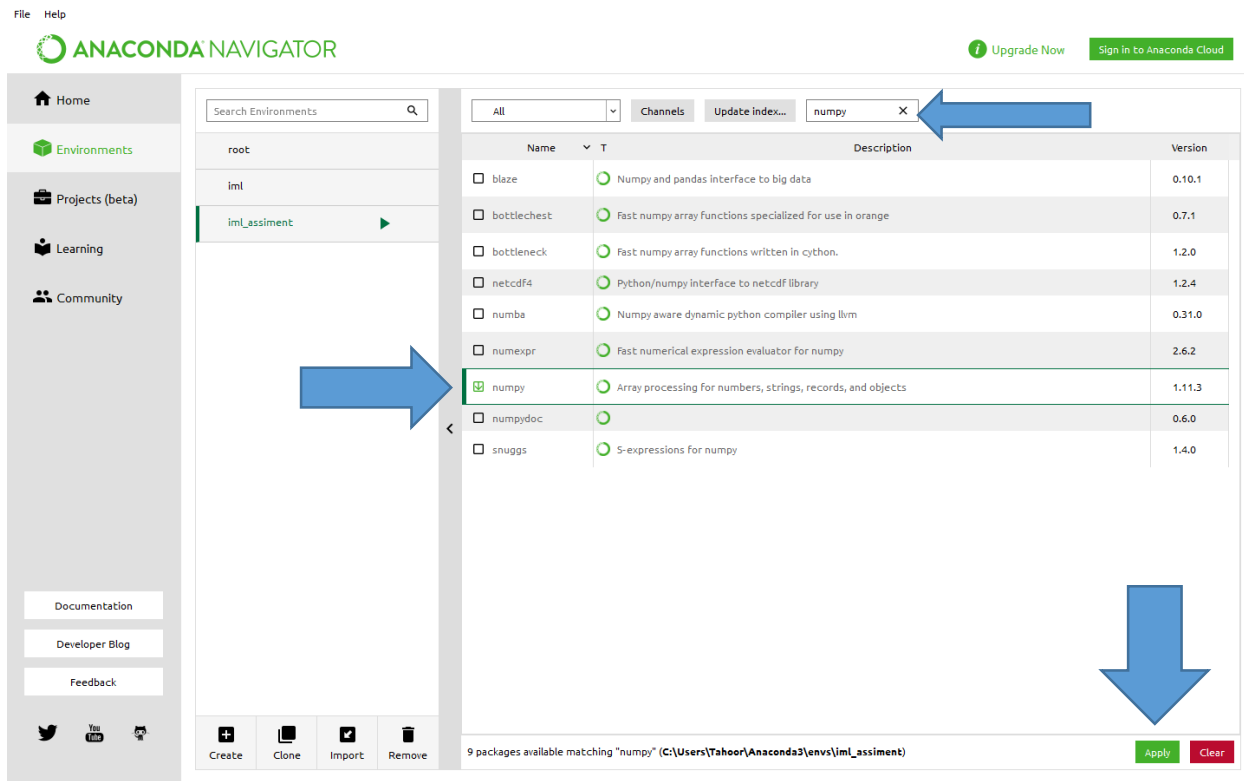
9. Now download following packages

- a. jupyter
- b. Numpy
- c. Pandas
- d. Seaborn
- e. Matplotlib
- f. Scikit-learn

10. To download these package first select "All" from the dropdown menu.



11. Now search the packages in "Anaconda" one by one and select them for install. After all packages are selected press "apply" to install them all.



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Search Environments

root

iml

iml_essiment

All Channels Update index... pandas X

Name	T	Description	Version
<input type="checkbox"/> blaze	<input checked="" type="radio"/>	Numpy and pandas interface to big data	0.10.1
<input checked="" type="checkbox"/> pandas	<input checked="" type="radio"/>	Powerful data structures and data analysis tools	0.19.2
<input type="checkbox"/> pandas-datereader	<input checked="" type="radio"/>	Data readers extracted from the pandas codebase	0.2.1
<input type="checkbox"/> pandasql	<input checked="" type="radio"/>	Sqlf for pandas	0.7.3

4 packages available matching "pandas" (C:\Users\Tahoor\Anaconda3\envs\iml_essiment)

Apply Clear

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All Channels Update index... seaborn X

Name	T	Description	Version
<input checked="" type="checkbox"/> seaborn	<input checked="" type="radio"/>	Statistical data visualization	0.7.1

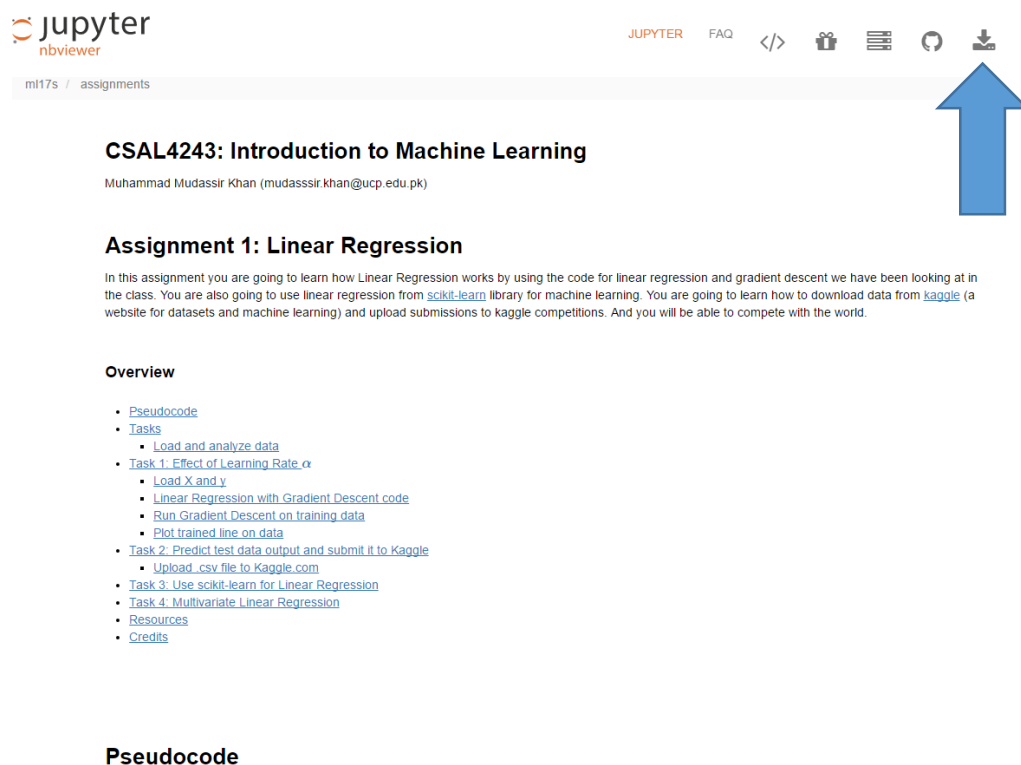
1 package available matching "seaborn" (C:\Users\Tahoor\Anaconda3\envs\iml_essiment)

Apply Clear


Downloading Assignment data.

12. Now create an account on “kaggle”. <https://www.kaggle.com/>
13. After creating account, open this link <https://www.kaggle.com/c/house-prices-advanced-regression-techniques/data> and download the following files.
 - a. train.csv.
 - b. test.csv.
 - c. data_description.txt.
 - d. sample_submission.csv.gz.

14. Now download the assignment from this link.
http://nbviewer.jupyter.org/github/w4zir/ml17s/blob/master/assignments/assignment_01-regression.ipynb
To download assignment click on “download sign”.



jupyter
nbviewer

JUPYTER FAQ </> 

ml17s / assignments

CSAL4243: Introduction to Machine Learning

Muhammad Mudassir Khan (mudassir.khan@ucp.edu.pk)

Assignment 1: Linear Regression

In this assignment you are going to learn how Linear Regression works by using the code for linear regression and gradient descent we have been looking at in the class. You are also going to use linear regression from [scikit-learn](#) library for machine learning. You are going to learn how to download data from [kaggle](#) (a website for datasets and machine learning) and upload submissions to kaggle competitions. And you will be able to compete with the world.

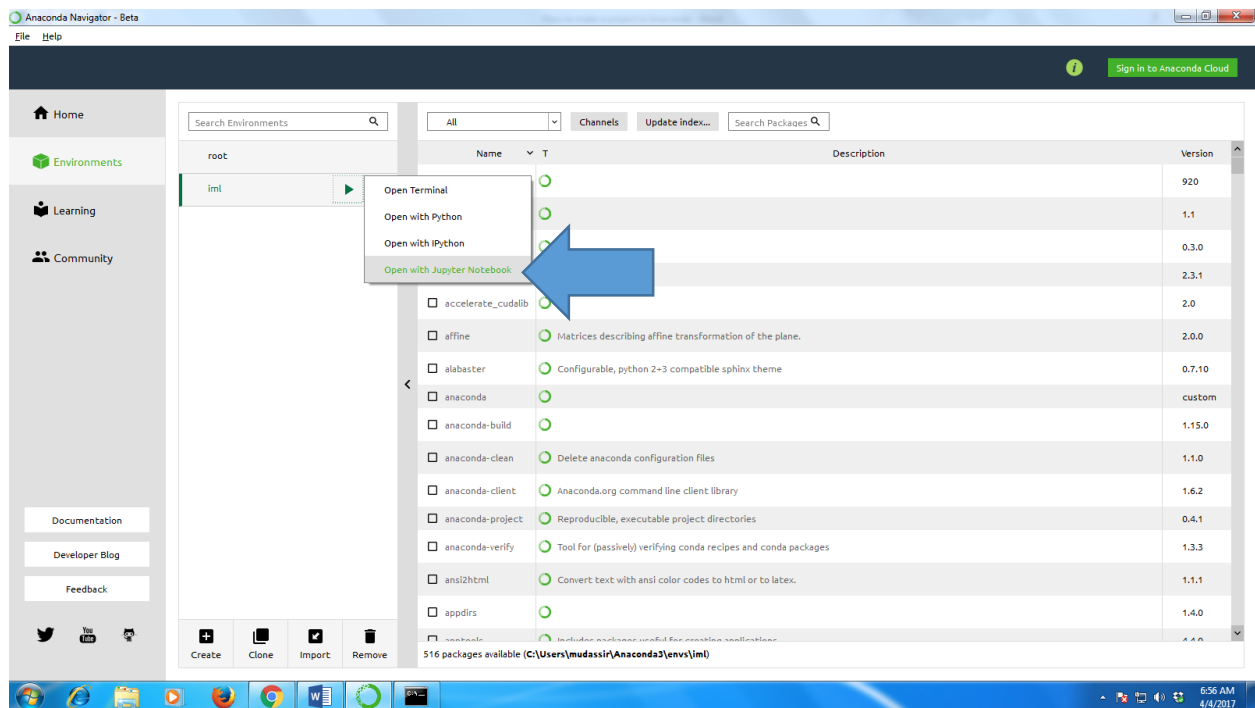
Overview

- [Pseudocode](#)
- [Tasks](#)
 - [Load and analyze data](#)
- [Task 1: Effect of Learning Rate \$\alpha\$](#)
 - [Load X and y](#)
 - [Linear Regression with Gradient Descent code](#)
 - [Run Gradient Descent on training data](#)
 - [Plot trained line on data](#)
- [Task 2: Predict test data output and submit it to Kaggle](#)
 - [Upload csv file to Kaggle.com](#)
- [Task 3: Use scikit-learn for Linear Regression](#)
- [Task 4: Multivariate Linear Regression](#)
- [Resources](#)
- [Credits](#)

Pseudocode

NOTE: KEEP ASSIGNMENT AND ALL FILES DOWNLOADED IN SAME FOLDER.

15. After downloading assignment data and installing all packages, now go back to “Anaconda” and click on the environment you created above and select “Open with jupyter notebook”.



16. It will open up a window.

Files Running Clusters

Select items to perform actions on them. Upload New ↕

<input type="checkbox"/>	🏠
<input type="checkbox"/>	Anaconda3
<input type="checkbox"/>	AnacondaProjects
<input type="checkbox"/>	Contacts
<input type="checkbox"/>	Desktop
<input type="checkbox"/>	Documents
<input type="checkbox"/>	Downloads
<input type="checkbox"/>	Favorites
<input type="checkbox"/>	Links
<input type="checkbox"/>	Music
<input type="checkbox"/>	OneDrive
<input type="checkbox"/>	Pictures
<input type="checkbox"/>	Saved Games
<input type="checkbox"/>	Searches
<input type="checkbox"/>	Videos

17. Go to the directory where you saved the files. My files are in a folder named as “IML_A1” which is in “Downloads” folder. So I go to “Downloads” and then “IML_A1”.

Files Running Clusters

Select items to perform actions on them. Upload New ↕

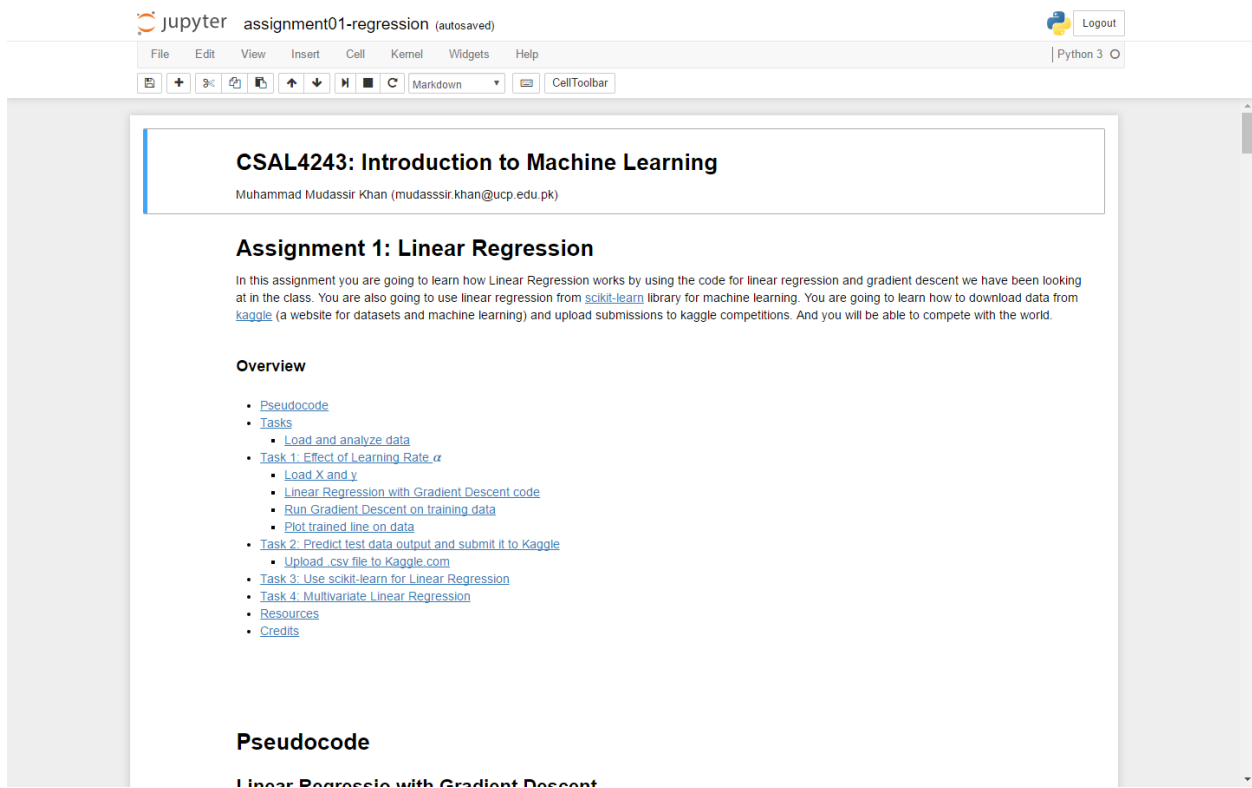
/ Downloads

<input type="checkbox"/>	..
<input type="checkbox"/>	316_Project_1
<input type="checkbox"/>	blender-2.78c-windows64
<input type="checkbox"/>	IML_A1
<input type="checkbox"/>	16832307_707719152734269_5369012937139580260_n.png
<input type="checkbox"/>	16934269_1444957908879732_1783685562_n.png
<input type="checkbox"/>	16939657_1209550549158164_456352200967235838_n.jpg
<input type="checkbox"/>	17626504_1882702495303071_3311960120551450303_n.jpg
<input type="checkbox"/>	316_Project_1.zip
<input type="checkbox"/>	6hgx81ww.exe
<input type="checkbox"/>	[fmovies.to] Gamer - HD 1080p.mp4
<input type="checkbox"/>	[fmovies.to] Logan - TS.mp4
<input type="checkbox"/>	[fmovies.to] The Space Between UsAmateur Night - HDRip.mp4
<input type="checkbox"/>	Anaconda3-4.3.1-Windows-x86_64.exe
<input type="checkbox"/>	Assignment 1.docx
<input type="checkbox"/>	blender-2.78c-windows64.zip
<input type="checkbox"/>	ChromeSetup.exe
<input type="checkbox"/>	CMS Completed (28-02-2017).zip
<input type="checkbox"/>	FA_Questions.docx
<input type="checkbox"/>	Project2-3.docx
<input type="checkbox"/>	rcsetup153.exe
<input type="checkbox"/>	sample_submission.solitairetheme8

18. Open “IML_A1” folder.



19. Now open “assignment01-regression.ipynb” which is the assignment file you downloaded in step 11. It will open it in a new where you can edit and run the python codes.



20. Change the path of dataset file as in image below. Click in the cell to edit.

Jupyter assignment01-regression (autosaved) Python 3

File Edit View Insert Cell Kernel Widgets Help

Code CellToolbar

Load and analyze data

```
In [10]: %matplotlib inline
import pandas as pd
import numpy as np
import seaborn as sns
from sklearn import linear_model
import matplotlib.pyplot as plt
import matplotlib as mpl

# read house_train.csv data in pandas dataframe df_train using pandas read_csv function
df_train = pd.read_csv('train.csv', encoding='utf-8')
```

```
[5]: # check data by printing first few rows
df_train.head()
```

```
Out[5]:
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	PoolArea	PoolQC	Fence	MiscFeature
0	1	60	RL	65.0	8450	Pave	NaN	Reg	Lvl	AllPub	0	NaN	NaN	NaN
1	2	20	RL	80.0	9600	Pave	NaN	Reg	Lvl	AllPub	0	NaN	NaN	NaN
2	3	60	RL	68.0	11250	Pave	NaN	IR1	Lvl	AllPub	0	NaN	NaN	NaN
3	4	70	RL	60.0	9550	Pave	NaN	IR1	Lvl	AllPub	0	NaN	NaN	NaN
4	5	60	RL	84.0	14260	Pave	NaN	IR1	Lvl	AllPub	0	NaN	NaN	NaN

5 rows x 81 columns

```
In [11]: # check columns in dataset
df_train.columns
```

```
Out[11]: Index(['Id', 'MSSubClass', 'MSZoning', 'LotFrontage', 'LotArea', 'Street',
'Alley', 'LotShape', 'LandContour', 'Utilities', 'LotConfig',
'LandSlope', 'Neighborhood', 'Condition1', 'Condition2', 'BldgType',
'HouseStyle', 'OverallQual', 'OverallCond', 'YearBuilt', 'YearRemodAdd',
'RoofStyle', 'RoofMatl', 'Exterior1st', 'Exterior2nd', 'MasVnrType',
'MasVnrArea', 'ExterQual', 'ExterCond', 'Foundation', 'BsmtQual',
'BsmtCond', 'BsmtExposure', 'BsmtFinType1', 'BsmtFinSF1',
'BsmtFinType2', 'BsmtFinSF2', 'BsmtUnfSF', 'TotalBsmtSF', 'Heating',
'HeatingQC', 'CentralAir', 'Electrical', '1stFlrSF', '2ndFlrSF',
'LowQualFinSF', 'GrLivArea', 'BsmtFullBath', 'BsmtHalfBath', 'FullBath',
'HalfBath', 'BedroomAbvGr', 'KitchenAbvGr', 'KitchenQual',
'TotRmsAbvGrd', 'Functional', 'Fireplaces', 'FireplaceQu', 'GarageType',
```

21. Now press “Ctrl + Enter” to execute the code. It will load dataset.

22. ‘*’ shows that code is executing. Wait for the code to execute.

Jupyter assignment01-regression (unsaved changes) Python 3

File Edit View Insert Cell Kernel Widgets Help

Code CellToolbar

Load and analyze data

```
In [*]: %matplotlib inline
import pandas as pd
import numpy as np
import seaborn as sns
from sklearn import linear_model
import matplotlib.pyplot as plt
import matplotlib as mpl

# read house_train.csv data in pandas dataframe df_train using pandas read_csv function
df_train = pd.read_csv('train.csv', encoding='utf-8')
```

```
In [5]: # check data by printing first few rows
df_train.head()
```

```
Out[5]:
```

	Id	MSSubClass	MSZoning	LotFrontage	LotArea	Street	Alley	LotShape	LandContour	Utilities	PoolArea	PoolQC	Fence	MiscFeature
0	1	60	RL	65.0	8450	Pave	NaN	Reg	Lvl	AllPub	0	NaN	NaN	NaN
1	2	20	RL	80.0	9600	Pave	NaN	Reg	Lvl	AllPub	0	NaN	NaN	NaN
2	3	60	RL	68.0	11250	Pave	NaN	IR1	Lvl	AllPub	0	NaN	NaN	NaN
3	4	70	RL	60.0	9550	Pave	NaN	IR1	Lvl	AllPub	0	NaN	NaN	NaN
4	5	60	RL	84.0	14260	Pave	NaN	IR1	Lvl	AllPub	0	NaN	NaN	NaN

5 rows x 81 columns

```
In [11]: # check columns in dataset
df_train.columns
```

```
Out[11]: Index(['Id', 'MSSubClass', 'MSZoning', 'LotFrontage', 'LotArea', 'Street',
'Alley', 'LotShape', 'LandContour', 'Utilities', 'LotConfig',
'LandSlope', 'Neighborhood', 'Condition1', 'Condition2', 'BldgType',
'HouseStyle', 'OverallQual', 'OverallCond', 'YearBuilt', 'YearRemodAdd',
'RoofStyle', 'RoofMatl', 'Exterior1st', 'Exterior2nd', 'MasVnrType',
'MasVnrArea', 'ExterQual', 'ExterCond', 'Foundation', 'BsmtQual',
'BsmtCond', 'BsmtExposure', 'BsmtFinType1', 'BsmtFinSF1',
'BsmtFinType2', 'BsmtFinSF2', 'BsmtUnfSF', 'TotalBsmtSF', 'Heating',
'HeatingQC', 'CentralAir', 'Electrical', '1stFlrSF', '2ndFlrSF',
'LowQualFinSF', 'GrLivArea', 'BsmtFullBath', 'BsmtHalfBath', 'FullBath',
'HalfBath', 'BedroomAbvGr', 'KitchenAbvGr', 'KitchenQual',
'TotRmsAbvGrd', 'Functional', 'Fireplaces', 'FireplaceQu', 'GarageType',
```

23. Now follow the instruction given in assignment to complete the given tasks.

THANKS😊