

Task 1

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python libraries

1/PREPARE YOUR DATA.

PANDAS

USE: LOAD,TRANSFORM,ANALYZE & SUMMARISE YOUR DATA

:LIMITATION

DATA HAS TO BE SMALL

ENOUGH TO FIT IN MEMORY

PYSPARK

:USE

PREPROCESS BIG DATA

(SIZE > MEMORY)

:LIMITATION

SPARK HAS TO BE INSTALLED

ON YOUR SYSTEM

DASK

:USE

PREPROCESS BIG DATA WHEN

SPARK IS NOT INSTALLED

:LIMITATION

CONTAINS FEWER FEATURES

THAN PYSPARK

2/PLOT YOUR DATA

MATPLOTLIB

:USE

QUICK DATA VISUALIZATIONS

FOR INTERNAL PURPOSES

:LIMITATION

LOW VISUAL QUALITY OF

THE FINAL PLOTS

PLOTLY

:USE

PRESENT YOUR DATA IN A

VISUALLY PEALING WAY

:LIMITATION

LOW PERFORMANCE IF THE

DATAFRAME IS BIG

.

3/BUILD YOUR MODEL

SCIPY

:USE

FOR ADVANCED LINEAR ALGEBRA

CALCULUS OPERATIONS &

:LIMITATION

DOES NOT OFFER MACHINE

LEARNING ALGORITHMS

NUMPY

:USE

STORE AND OPERATE ON

ARRAYS AND MATRICES

:LIMITATION

ADVANCED OPERATIONS ARE

NOT AVAILABLE

SKLEARN

:USE

CREATE VARIOUS TYPES OF

MACHINE LEARNING MODELS

:LIMITATION

LIMITED FUNCTIONALITY FOR

DEEP LEARNING

TENSORFLOW

:USE

& FOR NEURAL NETWORKS

DEEP LEARNING MODELS

:LIMITATIO

PROCESSING OF TEXT / IMAGES

NEEDS OTHER PACKAGES

4/ADD TO PRODUCT.

FLASK

:USE

EXPOSE YOUR MODEL TO
OTHER APPS VIA A REST API

:LIMITATION

NEED TO WORK WITH YOUR
SECURITY / SYSTEM ADMINS

DASH

:USE

TO BUILD A WEB APP THAT
BUSINESS CUSTOMER CAN USE

:LIMITATION

& STEEP LEARNING CURVE
CAN BE DIFFICULT TO DEBUG

python 2 vs 3

Basis of comparison	Python 3	Python 2
Release Date	2008	2000
Function print	print ("hello")	print "hello"
Division of Integers	Whenever two integers are divided, you get a float value	When two integers are divided, you always provide integer value.
Unicode	In Python 3, default storing of strings is Unicode.	To store Unicode string value, you require to define them with "u".
Syntax	The syntax is simpler and easily understandable.	The syntax of Python 2 was comparatively difficult to understand.
Rules of ordering Comparisons	In this version, Rules of ordering comparisons have been simplified.	Rules of ordering comparison are very complex.
Iteration	The new Range() function introduced to perform iterations.	In Python 2, the xrange() is used for iterations.
Exceptions	It should be enclosed in parenthesis.	It should be enclosed in notations.
Leak of variables	The value of variables never changes.	The value of the global variable will change while using it inside for-loop.
Backward compatibility	Not difficult to port python 2 to python 3 but it is never reliable.	Python version 3 is not backwardly compatible with Python 2.
Library	Many recent developers are creating libraries which you can only use with Python 3.	Many older libraries created for Python 2 is not forward-compatible.

