

# DATA SCIENCE USING PYTHON Week 1



# LET'S INTRODUCE OURSELVES!!

- Work-ex
- Company
- Motivation behind joining this course



***Please switch on our  
web camera***



# LEARNING OBJECTIVE OF THIS MODULE

- Basic Working proficiency in Python
- Basic Data-Manipulation using Python
- Basic Data-Visualization using Python

# LET'S SET SOME GROUND RULES

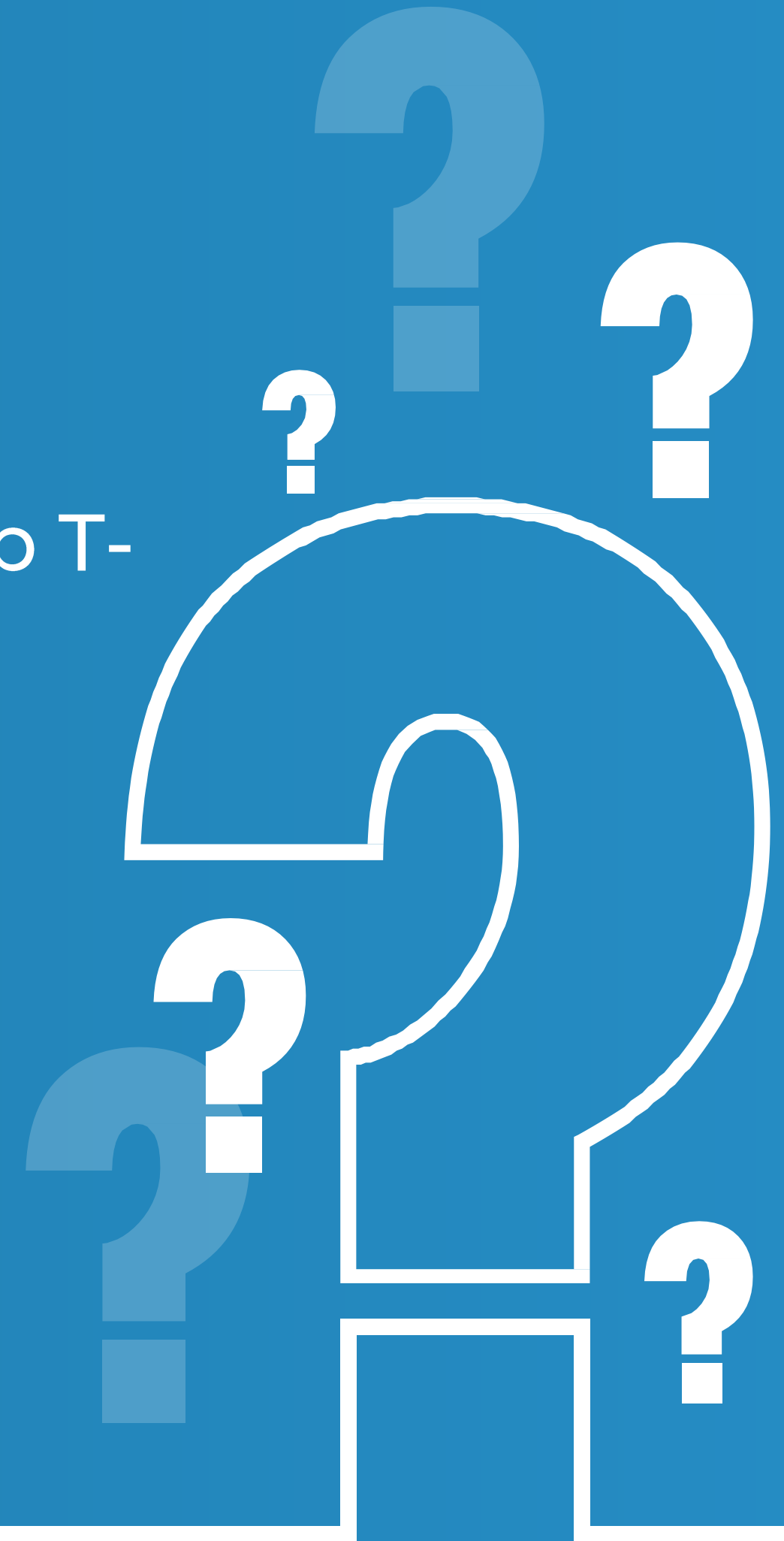
- Come prepared for these sessions by watching the videos.
  - Concepts will be covered in the videos.
  - Hands-On Application will be covered in Mentor Sessions.
- Submit all assignments on time.
- Let's be punctual & respect each other's time.



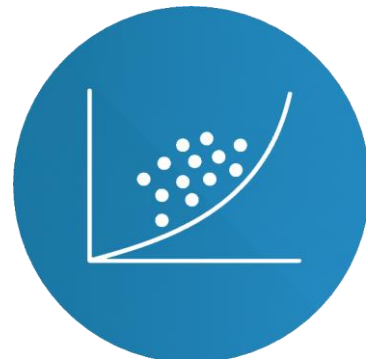


## TRY ANSWERING THE FOLLOWING

- Who will be the winner of upcoming Cricket World Cup T-20?
- Can you predict when an employee will resign from his/her organization?
- Can you predict how many comments a user generated post on Twitter is expected to receive in the given set of hours?
- Can you predict which client will default the loan payment based on the client's spending?
- Which stock will give >30% returns in the next 6 months?



# LEARNING OBJECTIVES OF THIS SESSION



- Understand the big picture of Data Science & Analytics



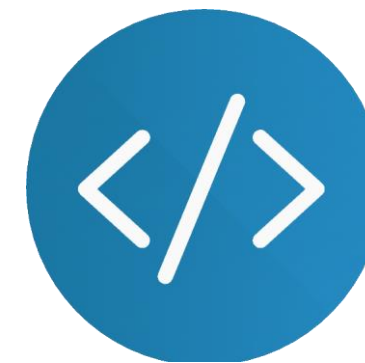
- PGPDSSBA Curriculum



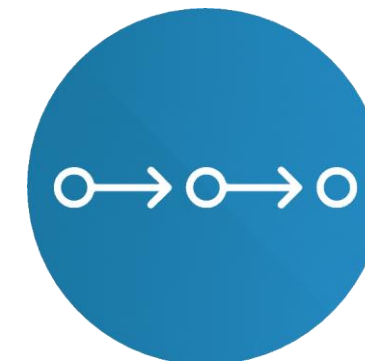
- Introduction to Python



- Installation Steps

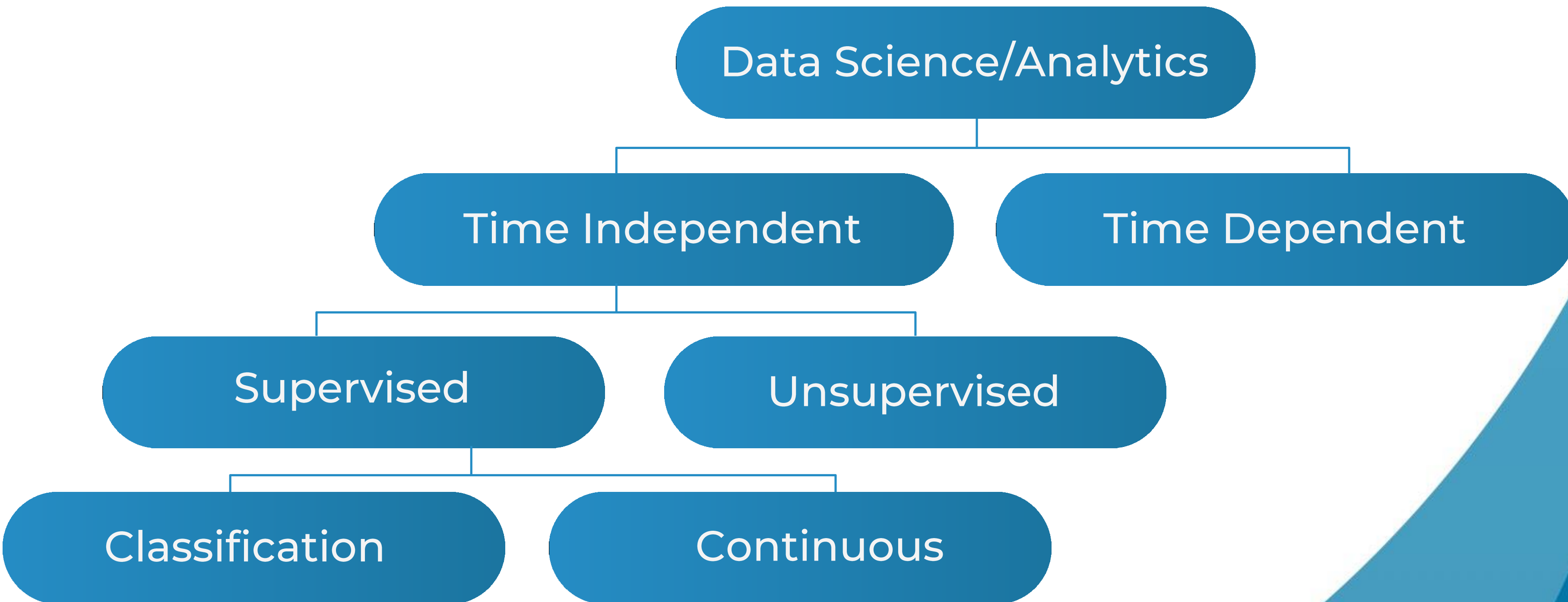


- Basic Operations in Python using a Case Study



- A journey of a thousand miles begins with a single step

# BIG PICTURE OF DATA SCIENCE & ANALYTICS



# DSBA CURRICULUM DESIGN

## FOUNDATIONS

Python for Data  
Science(1/4)

Statistical Methods  
for Decision Making

## CORE COURSES

Advanced Statistics

Data Mining

Predictive Modelling

Machine Learning

Time Series  
Forecasting

Data Visualization

SQL

## DOMAIN APPLICATIONS

Financial Risk  
Analytics

Marketing Retail  
Analytics



# PYTHON ( WHAT AND WHY ?)

- Python is the most popular programming language & choice for Data Scientist / Data Engineer across the world
- Very rich libraries & functions
- Community support
- Easy to deploy in production
- Support for all the new state of the art technologies



```
import random
n = random.randint(1, 99)
guess = int(raw_input("Enter a number from 1 to 99: "))
while n != "guess":
    print
    if guess < n:
        print "guess is low"
        guess = int(raw_input("Enter a number from 1 to 99: "))
    elif guess > n:
        print "guess is high"
        guess = int(raw_input("Enter a number from 1 to 99: "))
    else:
        print "Congrats! you guessed it!"
        break
    print
```



# HOW MANY OF US HAVE ALREADY INSTALLED PYTHON & JUPYTER ON THEIR SYSTEMS ?



# INSTALLATION STEPS

Install using the instruction given in the below links:

1. Install Jupyter - <http://jupyter.org/install>  
Preferred installation method is through **Anaconda distribution.**

Install **Python 3.6 version**

2. Anaconda 5.2 For Linux Installer  
- <https://www.anaconda.com/download/#linux>
3. Anaconda 5.2 For macOS Installer  
- <https://www.anaconda.com/download/#macos>
3. Anaconda 5.2 For Windows Installer  
- <https://www.anaconda.com/download/#windows>

***(You need to  
download the  
version  
compatible with  
your OS)***

# ANACONDA NAVIGATOR

File Help



Sign in to Anaconda Cloud

Home

Environments

Learning

Community

Documentation

Developer Blog



Applications on

base (root)

Channels

Refresh



JupyterLab

1.0.2

An extensible environment for interactive and reproducible computing, based on the Jupyter Notebook and Architecture.

Launch



Notebook

6.0.0

Web-based, interactive computing notebook environment. Edit and run human-readable docs while describing the data analysis.

Launch



Spyder

3.3.6

Scientific PYTHON Development Environment. Powerful Python IDE with advanced editing, interactive testing, debugging and introspection features

Launch



Glueviz

0.13.3

Multidimensional data visualization across files. Explore relationships within and among related datasets.

Install



Orange 3

3.19.0

Component based data mining framework. Data visualization and data analysis for novice and expert. Interactive workflows



RStudio

1.1.456

A set of integrated tools designed to help you be more productive with R. Includes R essentials and notebooks.



VS Code

1.44.2

Streamlined code editor with support for development operations like debugging, task running and version control.





## BY THE ALUMS



*This program helped me add skills and tools to transition to analytics with 45% hike*

Divya Sharma



*Make a non-techie stand as a technology specialist.  
Thanks to the pedagogy, content and support provided by Great Learning*

Sonakshi Pattnaik

# Basic Python Hands-on Exercise

- Data Types
- Conditional Statements and Loops
- User Defined Functions





**ANY QUESTIONS**



**HAPPY LEARNING**