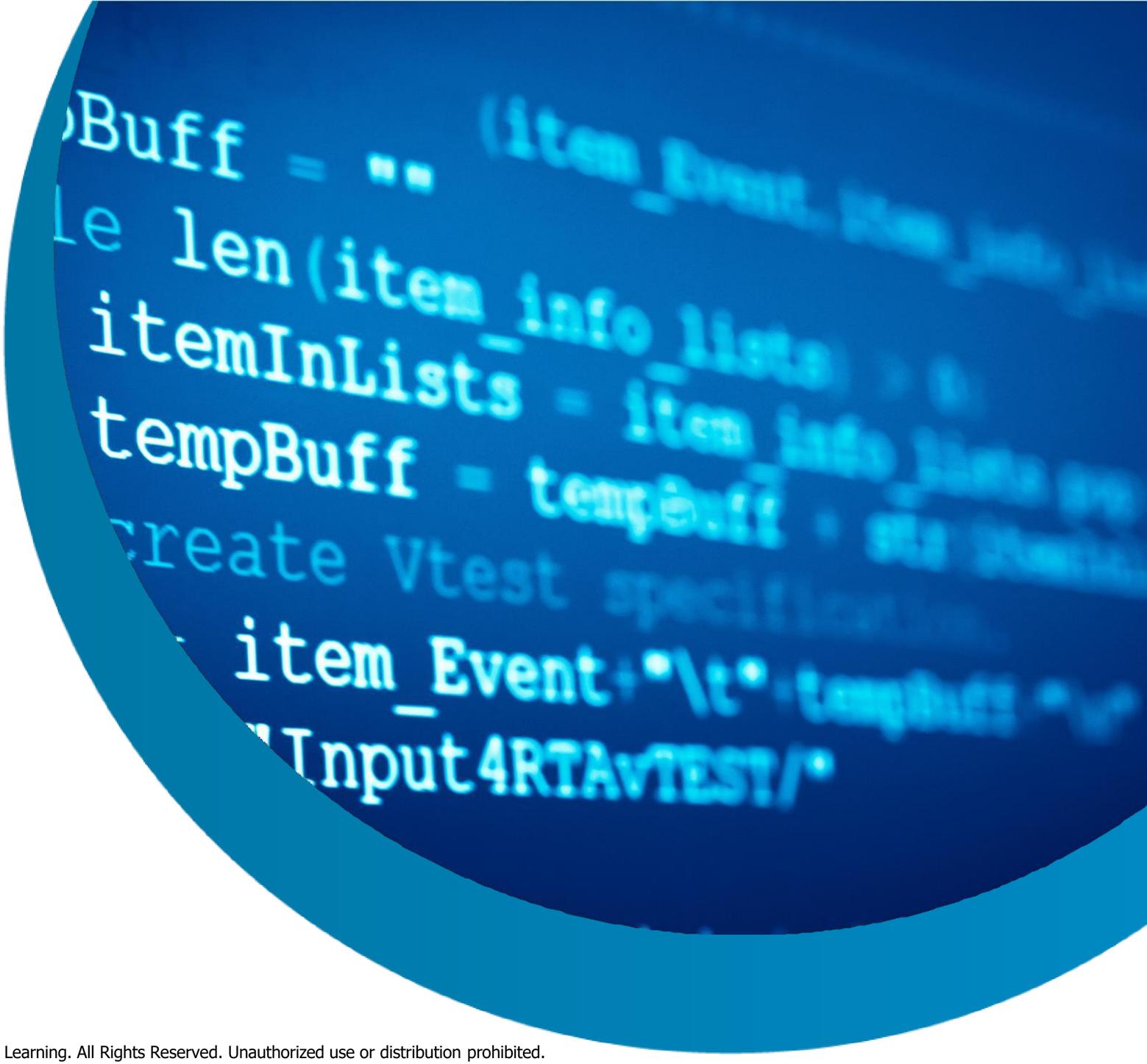
Great Learning
POWER AHEAD

DATA SCIENCE USING PYTHON
Week 1

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.

A Few Analytics Application

Case1: Can you predict which client will default the loan payment based on the client's spending?

- Why does the bank want to know who will default?
- What type of information I would need about the client to know the risk?
- Do you know what went wrong with ICICI bank and Yes bank

Case2: Can you predict when an employeewill resign from his/her organization?

- Why is this important for a company?
- What type of information do we need to make an informed decision ?
- If my company is a 40-50 years old company, should one use all the available data to proceed with this analysis?

Case3: Who will be the winner of upcoming Cricket World Cup T-20?

- Who will be interested in getting the answer to the above question?
- What is your guess?
- What is your guess based on?
- What past information will help you be more confident about your guess?

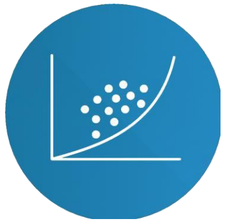
By the end of this Program,

Get deeper insights to the business objectives you want to achieve,

Know a variety of predictive modeling and machine learning techniques to simulate the current behavior and

Thus yielding financial benefits to your organization and increased customer satisfaction levels

LEARNING OBJECTIVES OF THIS SESSION

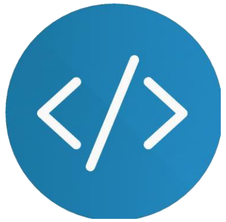


- Understand the big picture of Data Science & Analytics

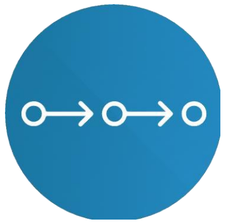
- PGPDSBA Curriculum

- Introduction to Python

- Installation Steps

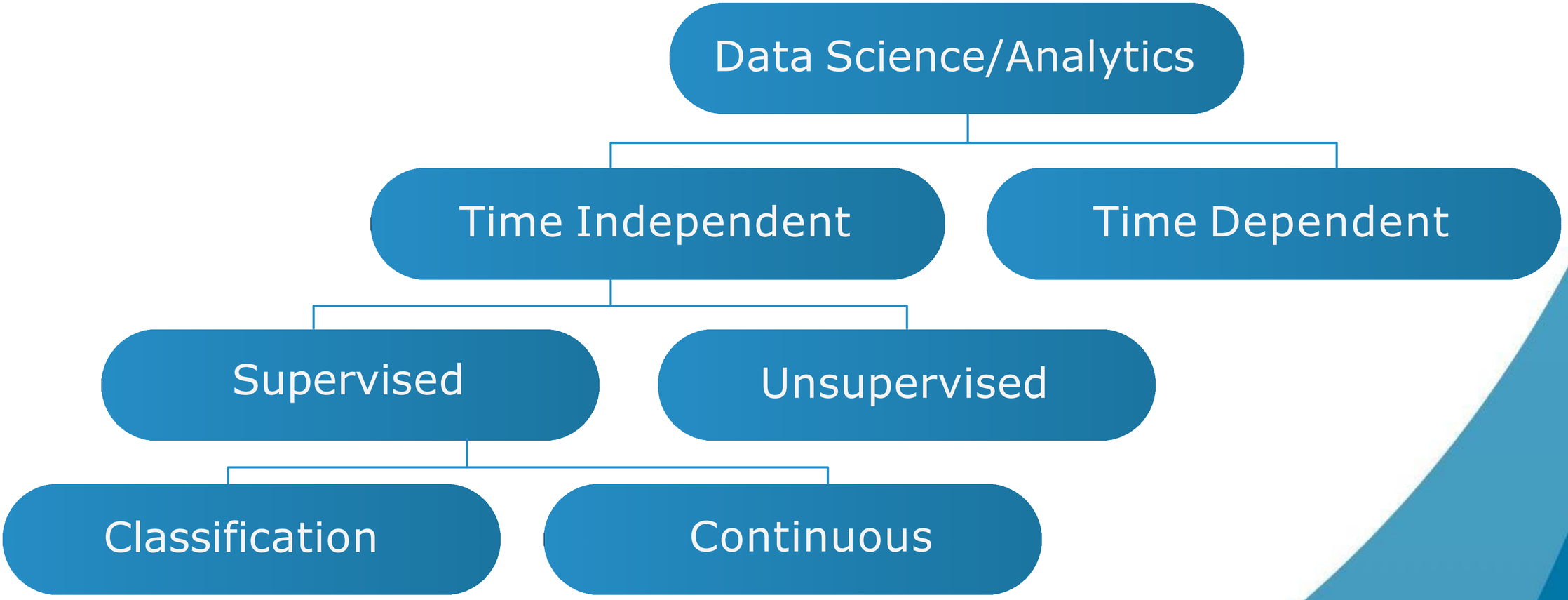


- Basic Operations in Python using a Case Study



- 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

BY THE ALUMS

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

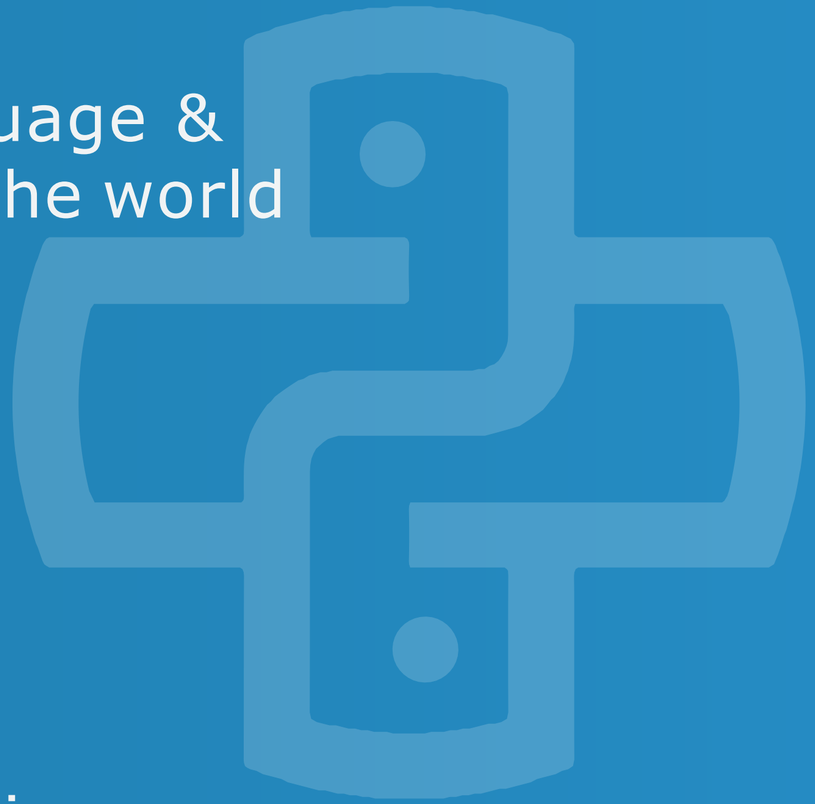
Divya Sharma

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

Sonakshi Pattnaik

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



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.**

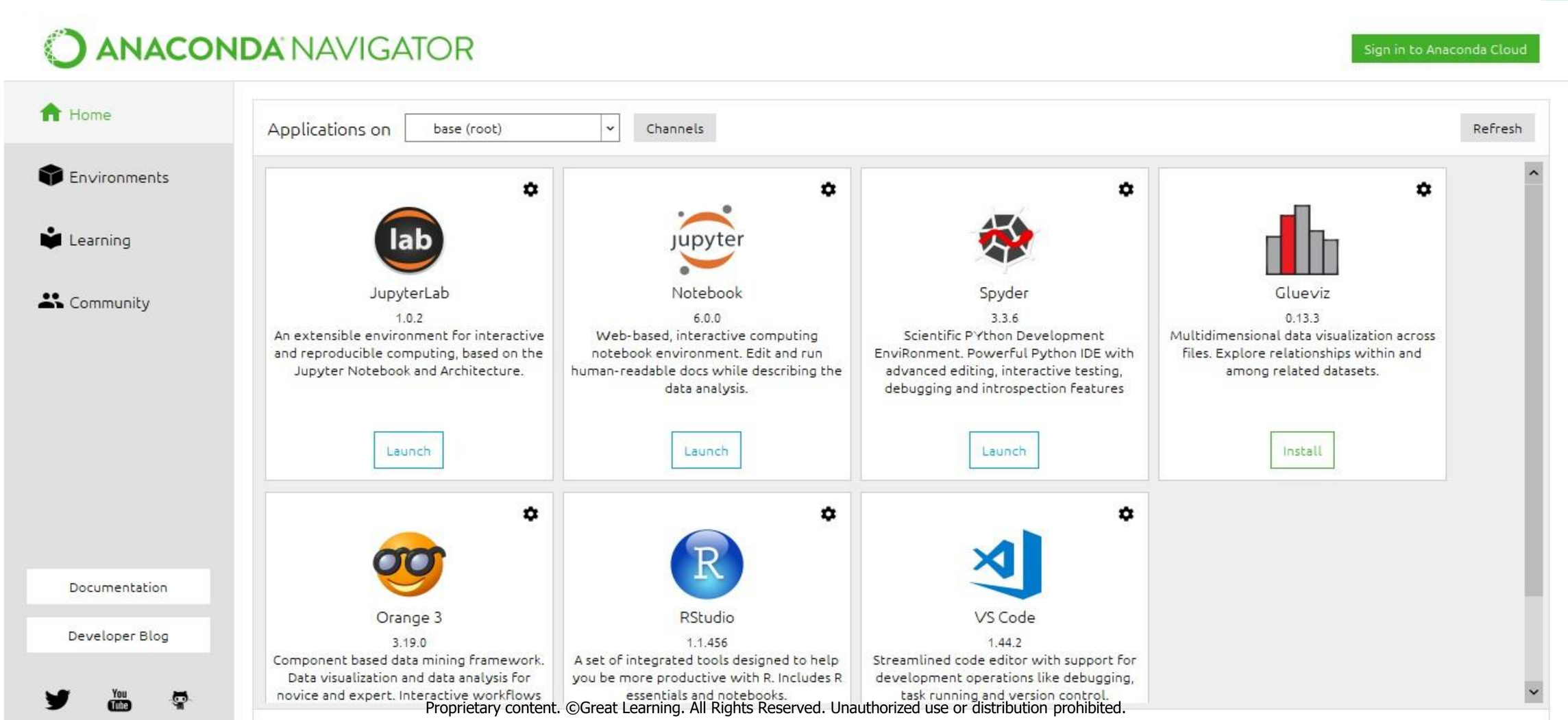
Install **Python 3.6 or higher version**

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



PDS Project –UberDrive

Do youknow?

Within the next 3 weeks, you will learn techniques to analyze the data and understand the patterns in the given data.

In the upcoming PDS Project, you will be working on a real data which is based on the trips made by uber drivers. The objective of the project will be to analyze different aspects of the trips.

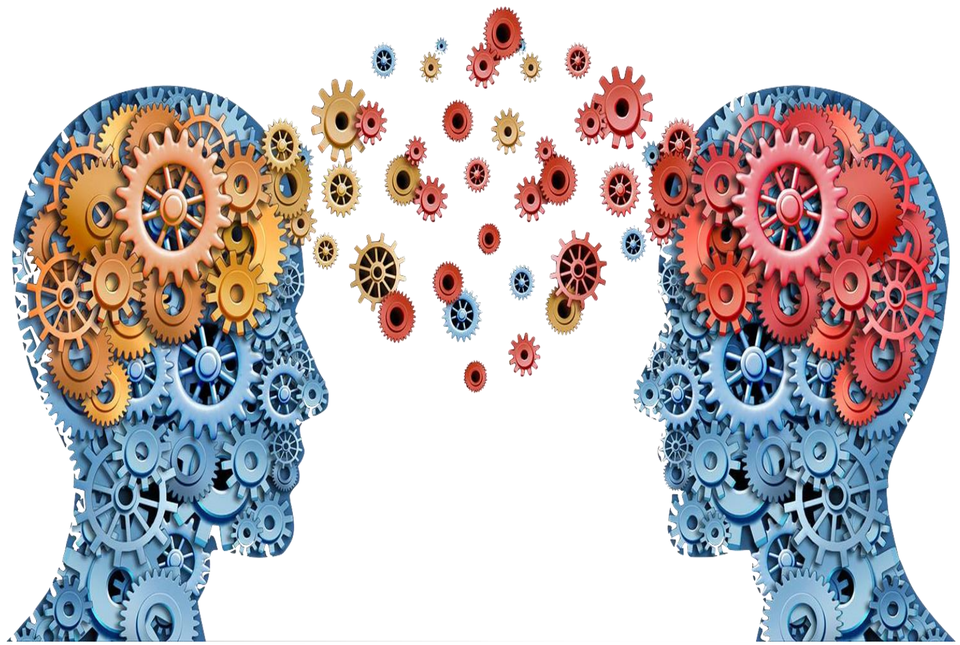
Let’s start with Python

- Launching Jupyter Notebook
- Opening ipnyb file
- Setting Working Directory
- Changing Working Directory
- Saving ipnyb file

Let's Learn Together –A Unique Platform for Peer to Peer Learning

Next Week's Theme:

Basics of Python (Numpy and Pandas)



Benefits of Peer to Peer Learning:

- Active Learning
- Gain a Deeper Understanding
- Feel More Comfortable
- Personalized Learning Experience

What all can be discussed in a Discussion forum?

- Analytical Concepts
- Issues in Code
- Industry Examples on various analytics concepts
- Software Installation Issues

Basic Python Hands-on Exercise

- Data Types
- Conditional Statements and Loops

How to debug your code:

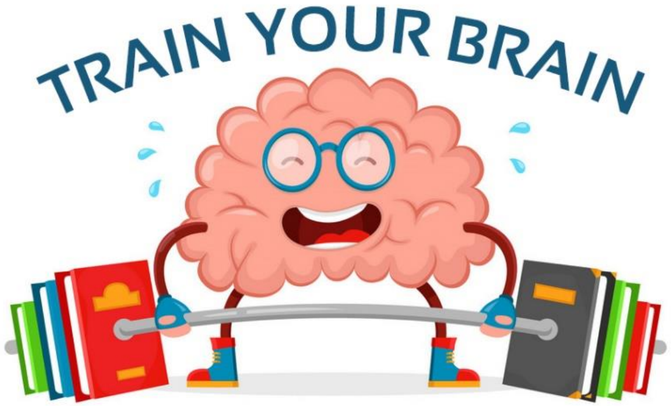
1) Try to debug on your own by reading & understanding the error message- This is an essential step in the learning process.

2) Refer to Python Codebooks shared in the Program Overview course.

3) Discuss it with the Peers over WhatsApp groups. It will help others in the group understand various nuances of coding.

4) Search your problem in Stack Overflow. You are not expected to learn all the codes by heart. Even the experts regularly search for help on Stack Overflow.

5) Get your query resolved in the Mentor Sessions or via Program Support feature available in Olympus.



ANY QUESTIONS

HAPPY LEARNING