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DATA SCIENCE USING PYTHON
Week 1

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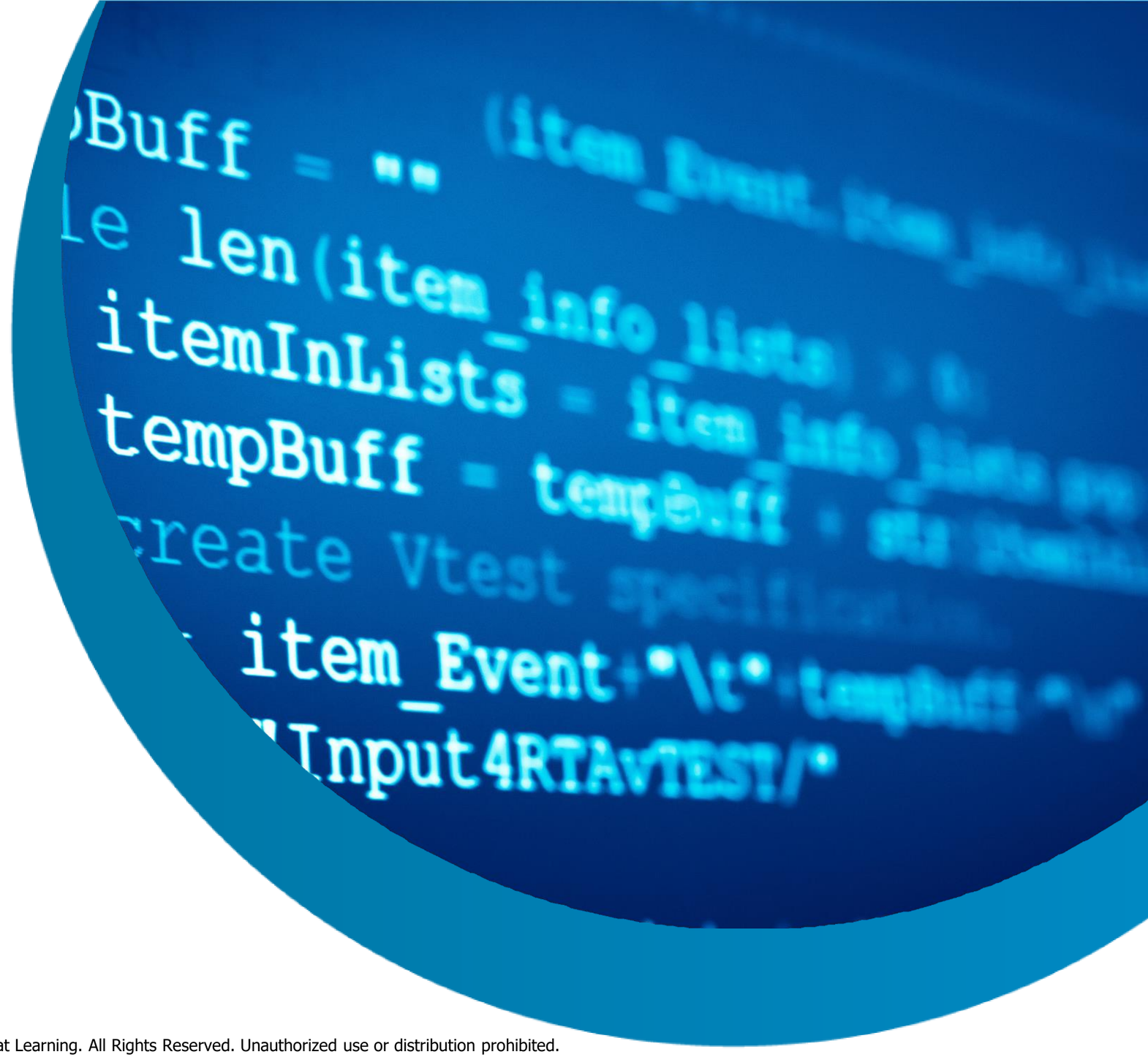
LEARNING OBJECTIVE OF THIS MODULE

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



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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.

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A Few Analytics Application

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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

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Case2: Can you predict when an employee will 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?

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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?

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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

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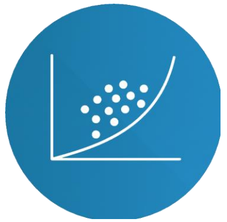
LEARNING OBJECTIVES OF THIS SESSION



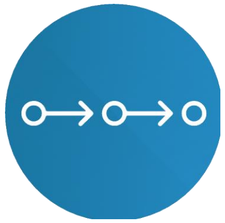
- Understand the big picture of Data Science & Analytics

- 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

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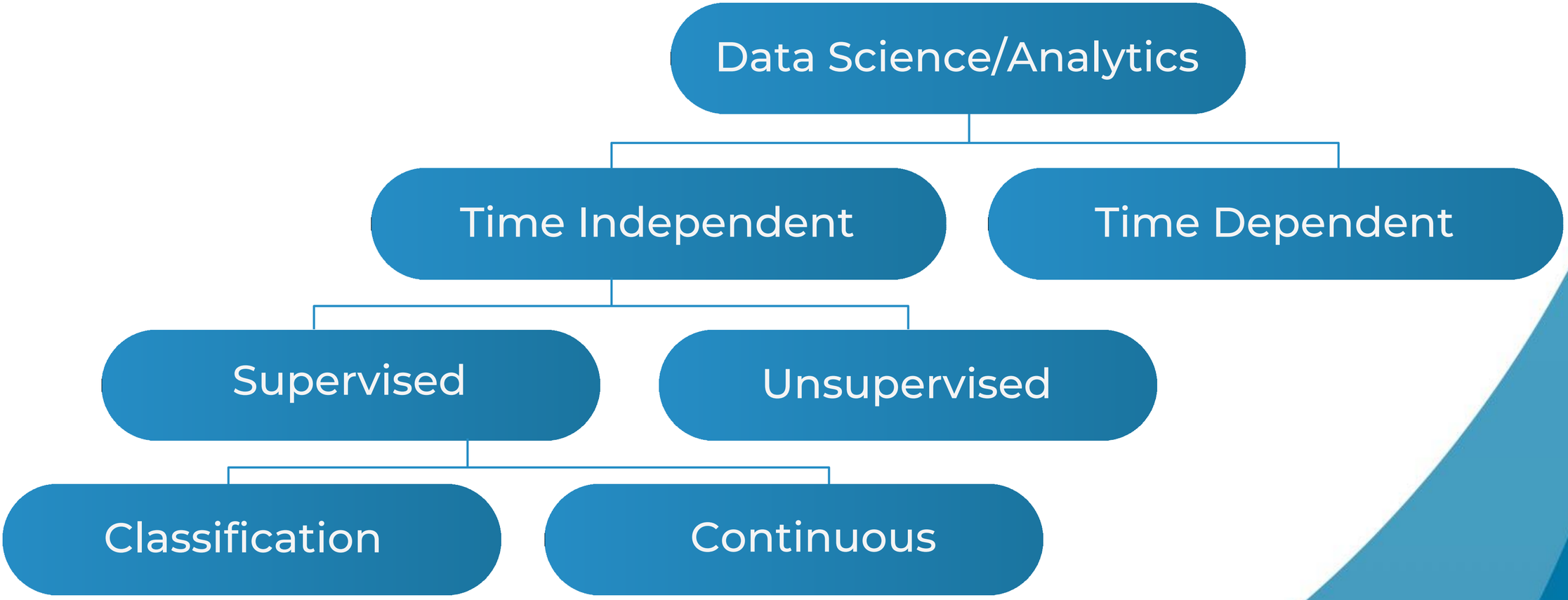
BIG PICTURE OF DATA SCIENCE & ANALYTICS



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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

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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

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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 ?

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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)

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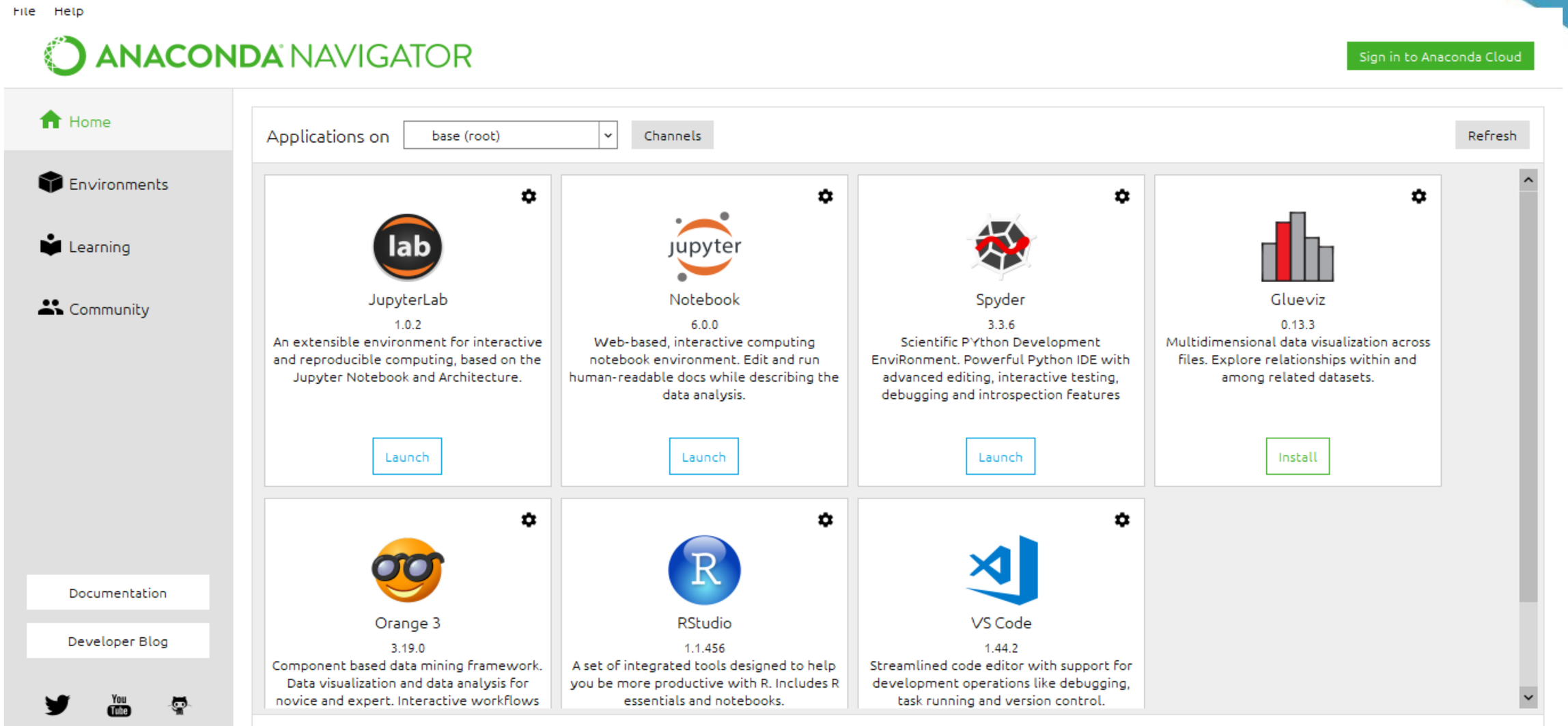
ANACONDA NAVIGATOR



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PDS Project – UberDrive

Do you know?

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.

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Let’s start with Python

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

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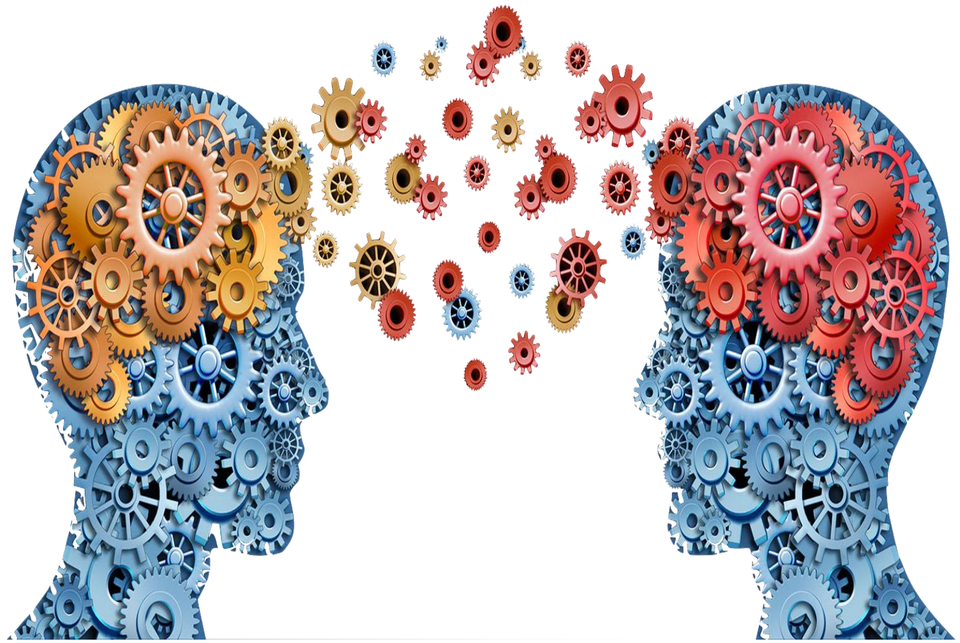
Let’s Learn Together – A Unique Platform for Peer to Peer Learning

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

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Basic Python Hands-on Exercise

- Data Types
- Conditional Statements and Loops

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ANY QUESTIONS

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HAPPY LEARNING