IT Expert

TECHNOLOGY

Data Science with python

(Complete course)

NOW YOU CAN CODE

100% PLACEMENT

Vinodthete190@gmail.com

+91 9673921886

An Overview

A data science course provides comprehensive training in the field of data science, which involves extracting actionable insights from large and complex datasets to drive business decisions and solve real-world problems. These courses cover a wide range of topics and techniques, including Basic Python, data analysis, statistics, machine learning, Deep Learning, Artificial Intelligence, and projects etc.

1 Introduction to Data Science

- Selecting rows/observations
- Rounding Number
- Selecting columns/fields
- Merging data
- Data aggregation
- Data munging techniques

2 Introduction to Python

- What is Python?
- Why Python?
- Installing Python
- Python IDEs
- Jupyter Notebook Overview

3 Python Basics

- Data types
- Lists
- Slicing
- IF statements
- Loops
- Dictionaries
- Tuples
- Functions
- Array
- Selection by position & Labels

4 Python Packages

- Pandas
- Numpy
- Sci-kit Learn
- Mat-plot library

5 Data Types

- Reading CSV files
- Saving in Python data
- Loading Python data objects
- Writing data to CSV file

6 Manipulating Data

- Selecting rows/observations
- Rounding Number
- Selecting columns/fields
- Merging data
- Data aggregation
- Data munging techniques

7 Statistics Basics

Central Tendency
- Mean
- Median
- Mode
- Skewness
- Normal Distribution

Probability Basics
- What does it mean by probability?
- Types of Probability
- ODDS Ratio?

Standard Deviation
- Data deviation & distribution
- Variance

Bias variance Tradeoff
- Under fitting
- Over fitting

Distance metrics
- Euclidean Distance
- Manhattan Distance

Missing Value treatment
- What is NA?
- Central Imputation
- Correlation

8 Error Metrics

Classification

- Confusion Matrix
- Precision
- Recall
- Specificity
- F1 Score

Regression

- MSE
- RMSE
- MAPE

MACHINE LEARNING

1 Supervised Learning

- Linear Regression
  - Linear Equation
  - Slope o Intercept
  - R square value
- Logistic regression
  - ODDS ratio
  - Probability of success
  - Probability of failure Bias
  - Variance Tradeoff
  - ROC curve
  - Bias Variance Tradeoff

2 Unsupervised Learning

- K-Means
- K-Means ++
- Hierarchical Clustering

MACHINE LEARNING

3 SVM

- Support Vectors
- Hyperplanes
- 2-D Case
- Linear Hyperplane

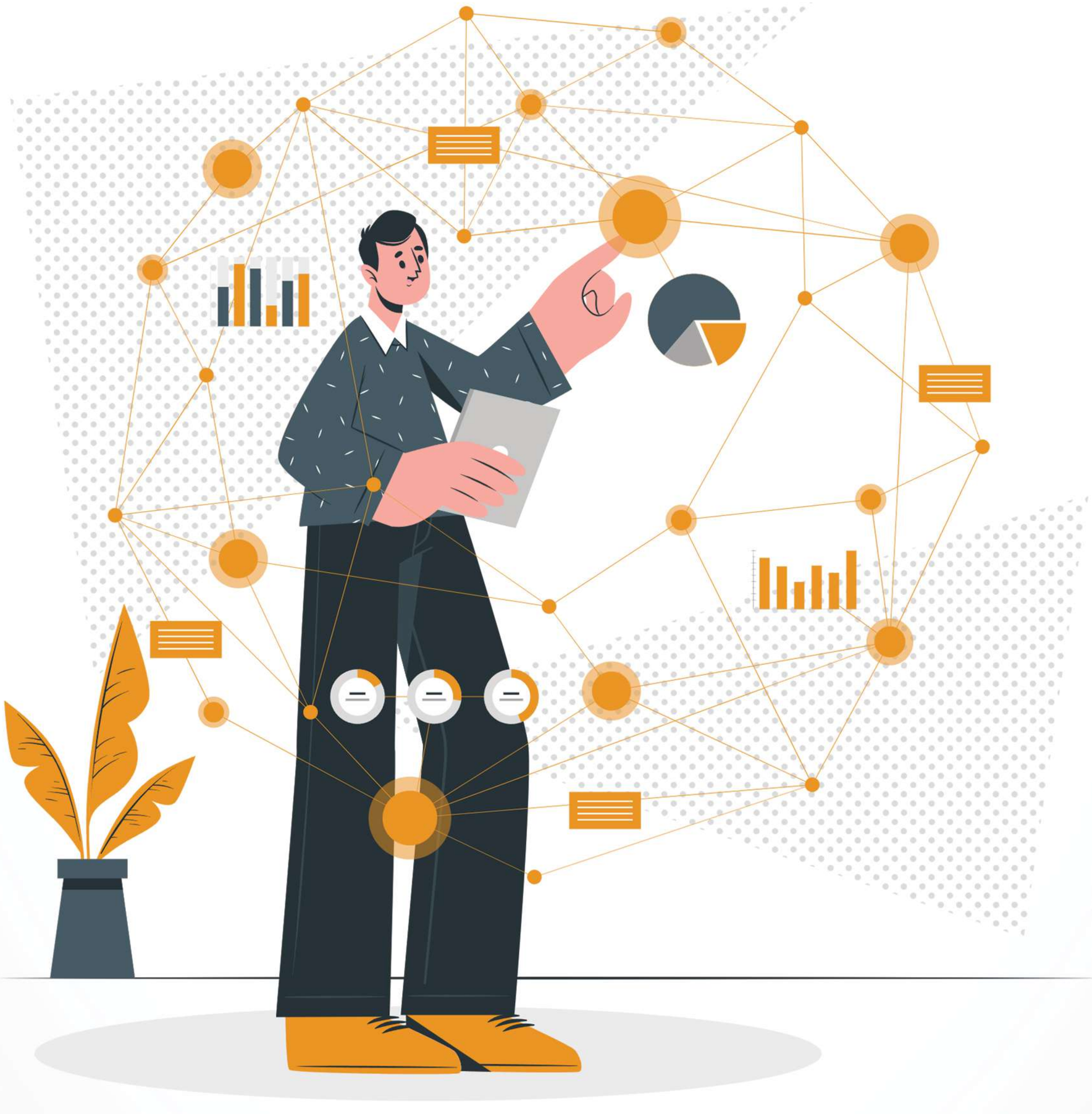
4 Machine Learning Algorithms

- K – Nearest Neighbour
- Naïve Bayes Classifier
- Decision Tree
- Random Forest

ARTIFICIAL INTELLIGENCE

1 AI Introduction

- Perceptron
- Multi-Layer perceptron
- Markov Decision Process
- Logical Agent & First Order



DEEP LEARNING

1 Deep Learning Algorithms

- CNN – Convolutional Neural Network
- RNN – Recurrent Neural Network
- ANN – Artificial Neural Network

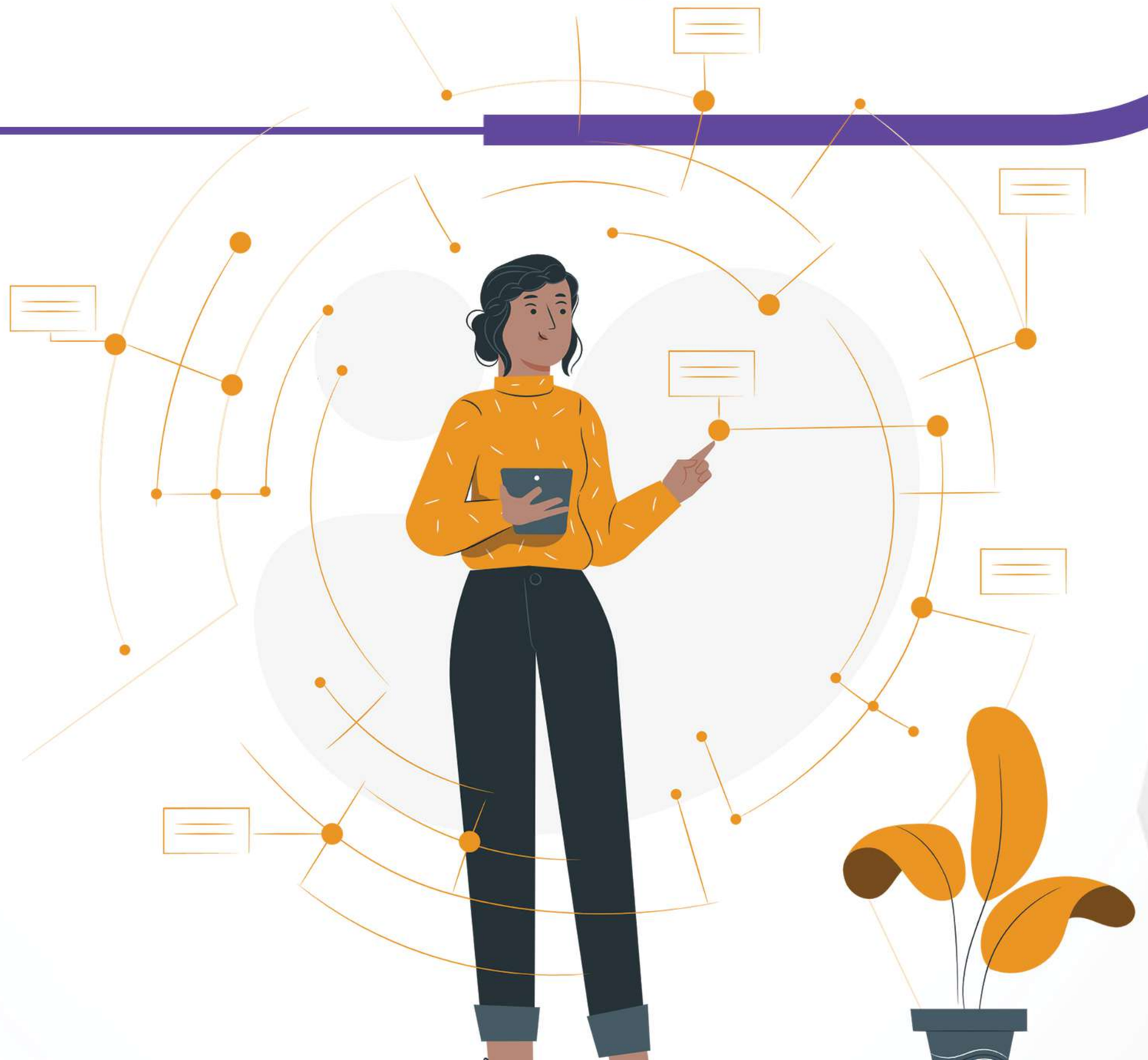
2 Introduction to NLP

- Text Pre-processing
- Noise Removal
- Lexicon Normalization
- Lemmatization
- Stemming

DEEP LEARNING

3 Feature Engineering

- Syntactical Parsing
- Dependency Grammar
- Part of Speech Tagging
- Entity Parsing
- Named Entity Recognition
- Topic Modelling
- N-Grams
- TF – IDF
- Frequency / Density Features
- Word Embedding's



TABLEAU

1 Tableau Course Material

- Start Page
- Show Me
- Connecting to Excel Files
- Connecting to Text Files
- Connect to Microsoft SQL Server
- Connecting to Microsoft Analysis Services
- Creating and Removing Hierarchies
- Bins
- Joining Tables
- Data Blending

TABLEAU

2 Learn Tableau Basic Reports

- Arameters
- Grouping Example 1
- Grouping Example 2
- Edit Groups
- Set
- Combined Sets
- Creating a First Report
- Data Labels
- Create Folders
- Sorting Data
- Add Totals, Subtotals and Grand Totals to Report

TABLEAU

3 Learn Tableau Charts

- Area Chart
- Bar Chart
- Box Plot
- Bubble Chart
- Bump Chart
- Bullet Graph
- Circle Views
- Dual Combination Chart
- Dual Lines Chart
- Funnel Chart
- Traditional Funnel Charts
- Gantt Chart
- Grouped Bar or
- Side by Side Bars Chart
- Heatmap
- Highlight Table
- Histogram
- Cumulative Histogram
- Line Chart
- Lollipop Chart
- Pareto Chart
- Pie Chart
- Scatter Plot
- Stacked Bar Chart
- Text Label
- Tree Map
- Word Cloud
- Waterfall Chart

TABLEAU

4 Learn Tableau Calculations & Filters

- Calculated Fields
- Basic Approach to Calculate Rank
- Advanced Approach to Calculate Ra
- Calculating Running Total
- Filters Introduction
- Quick Filters
- Filters on Dimensions
- Conditional Filters
- Top and Bottom Filters
- Filters on Measures
- Context Filters
- Slicing Fliters
- Data Source Filters
- Extract Filters

TABLEAU

5 Learn Tableau Dashboards

- Create a Dashboard
- Format Dashboard Layout
- Create a Device Preview of a Dashboard
- Create Filters on Dashboard
- Dashboard Objects
- Create a Story

6 Server

- Tableau online.
- Overview of Tableau
- Publishing Tableau objects and scheduling/subscription.

SQL

1 Introduction to Database

- List the features of Oracle Database 11g
- Discuss the basic design, theoretical, and physical aspects of a relational database
- Categorize the different types of SQL statements
- Describe the data set used by the course
- Log on to the database using SQL Developer environment
- Save queries to files and use script files in SQL Developer

SQL

2 Working with Database

- Inserting Variables
- Mysql connection
- Python database management
- SQL using python SQlite

PROJECTS

1 Projects

- Gun Detection using Python OpenCV
- Brain Tumor detection
- Disease Prediction Using Machine Learning
- Predicting Stock Price Direction using Support Vector Machines
- Face and Hand Landmarks Detection using Python – Mediapipe, OpenCV
- Wine Quality Prediction – Machine Learning
- Human Activity Recognition
- Twitter Sentiment Analysis

CONNECT WITH US

Vinod Sir, CEO

vinodthete190@gmail.com

+91 9673921886

www.ltexperttechnology.com

Sohum Crest , Near Gurudwara Mandir,
Akurdi Station , Pune 411033