



INTERNSHIP IN DATA SCIENCE



Python Introduction

- short history
- introduction
- Features
- Python Installation
- Python Interpreter
- How to Run Python
- Variable and Data Types
- Numbers-strings-Lists-Tuple-set-Dictionary
- Operators
- Arithmetic Operations



Looping

- For loop
- For loop with else
- While Loop
- Nested

Conditional Statements

- For loop
- if
- if..else
- if..elif..else
- Nested

Control Statements

- Break
- Continue
- pass

Data Types

- List Comprehension
- Set Comprehension
- Dictionary Comprehension

Comprehensions

- List
- Set
- Dictionary



Functions

- Definition
- Calling
- Arguments
- Lambda Functions
- Recursive Functions
- Functions Returning values

Modules

- Creating Modules
- Import Statements
- packages

Modules

- Opening
- Reading
- Writing
- Closing
- Renaming
- Deleting



Production Grand Programming

1. Oops:

- Object
- Class
- Inheritance
- Polymorphism

2. Error and exception Handling:

- Try
- Except
- Else
- Finally

Python Module

Numpy

NumPy Introduction, Installation of NumPy, Creating Arrays, Array Indexing, Array Slicing, Data Types, Array Shape, Array Reshaping, Array Iterating, Joining Array, Splitting Array, Searching Arrays, Sorting Arrays, Filter Array

Pandas



Pandas Introduction, Installation of Pandas, Pandas Series, DataFrames, Reading data files(CSV) Analyzing Dataset, Cleaning Dataset

Matplotlib

Pandas Introduction, Installation of Pandas, Pandas Series, DataFrames, Reading data files(CSV) Analyzing Dataset, Cleaning Dataset

Seaborn

Seaborn module, Installation, Loading inbuilt datasets, Different categories of plots, Relational plots(replot, scatterplot, Lineplot), Distribution plots(displot, histplot) Categorical plots, barplot, countplot, boxplot), Regression plots(lmplot, regplot, Matrix plot, heatmap)

Statistics

Introduction to Statistics, Data, Types of Data, Descriptive Statistics, Inferential Statistics, Data sampling and Distributions.



Introduction to SQL

- Keys
- Create , Alter , Delete , Drop tables
- SQL Select
- Insert , Update , Delete table data
- Where condition
- LEFT Join , Right Join, Inner Join
- Aggregate Functions
- Data Grouping & Filtering

Data Science Introduction

Introduction to Data Science

What is Data **Science**?, What does Data **Science** involve?

Era of Data **Science**, Business Intelligence vs Data Science, Life cycle of Data **Science**, Tools of Data Science

Data Extraction, Wrangling, Visualization

Data Analysis Pipeline, What is Data Extraction, Types of Data, Raw and Processed Data, Data Wrangling, Exploratory Data Analysis, Visualization of Data



Excel

- Introduction to Excel
- Data Entry
- Basic Formulas
- Basic Functions 1
- Basic Functions 2

Tableau

- Data Preparation using Tableau Prep
- Data Connection with Tableau Desktop
- Basic Visual Analytic
- Calculations in Tableau

Machine Learning

Introduction to Machine Learning

Python Revision (numpy, Pandas, scikit learn, matplotlib), What is Machine Learning?, Machine Learning Use-Cases, Machine Learning Process Flow, Statistics for machine learning.

Supervised Learning

Classification problems, Types of classification, Classification algorithms(Logistic Regression, Support Vector Machine, K-Nearest Neighbors, Decision Tree, Naive Bayes, Random Forest, Gradient Boosting)



Regression problems, Types of regression, Regression algorithms(Linear regression)

Feature scaling methods, Feature encoding methods, Log Loss or Cross-Entropy Loss, ROC and AUC, CAP, Classifier evaluation, Classification report evaluation.

Unsupervised Learning

Unsupervised learning methods, Clustering analysis, Clustering algorithms (K-means clustering, DBSCAN), Association methods and algorithm(Apriori algorithm), Dimensionality reduction techniques, PCA.

Reinforcement Learning

Introduction to Reinforcement Learning, Reinforcement Learning algorithms



Text Mining

- **Introduction to text Mining**

Process of text mining, Techniques for text mining, Stages in text analysis

- **NLP**

Importance of NLP, Techniques in NLP, Libraries for NLP, NLTK Environment, Tokenization, frequency distinct in the tokens, Stemming, lemmatization, Stop words, POS, NER, Chunking, Tasks.

Flask

- **Installing Flask**
- **Creating a Base Application**
- **Basic HTML template**
- **Setting up the Database**
- **Display all posts**
- **Error handling**



Computer vision

Introduction to computer vision

What is computer vision, CV tasks, How does CV works, Applications, CV libraries

Convolution Neural Network

What is Convolution neural network Network, Filtering, ReLU Layer, Pooling, Data Flattening, Fully Connected Layer, Predicting a cat or a dog, Saving and Loading a Model

Open CV

Installing Opencv, Reading image, Displaying image, Saving image, Converting image to grey scale, Edge detection, Cropping image, Accessing image properties, Extracting RGB values, Calculate the region of interest, Resizing image, Rotating image, Drawing rectangle, circle and polylines, Displaying text, Thresholding, Playing video, Capturing video from camera, Saving video.
Face recognition system using openCV

Deep learning

Introduction to deep learning

What is Deep Learning?, Curse of Dimensionality, Machine Learning vs. Deep Learning, Use cases of Deep Learning, Human Brain vs. Neural Network, What is Perceptron?, Learning Rate, Epoch, Batch Size, Activation Function, Single Layer Perceptron, Tensorflow and Keras

ANN

CNN on diabetes dataset, Churn prediction using CNN, Hand written digit recognition using ANN



Data Science Tech Stack



Our interns Who Got Placed in Last 4 Months



Arya

React js Developr



Midhun

UI/UX Designer



Prasana

UI/UXI Designer



Sandhya

Front End Developer



Zamil

Flutter developer



Silpa

Python DJANGO Developer



Rishna

PHP Developer



Sajana

PHP Developer



Deepak

Python DJANGO



Thushara

Python DJANGO



Reshma

Python Developer



Drishya

UI/UX Designer



Vineetha

Python Developer



Muhammad Anshif

Flutter developer



Raniya

Mobile app developer



SoftroniiCS®



Our Technology Expertise

 python™

 django

 Flutter

 HTML5

 PHP

 Figma

 Adobe XD

 node.js®

 Dart

 ARDUINO

 jQuery

 Microsoft .NET

 aws

Express  JS

 DevOps