GUIDANCE POINT:- PUNE'S PREMIER EDUCATION HUB

Welcome to Guidance Point, your ultimate destination for comprehensive education and professional development! At Guidance Point, we believe in empowering individuals to unlock their full potential through accessible and high-quality education. With a vast array of courses covering all domains, from technology to arts, business to sciences, we strive to cater to the diverse learning needs of our users. Whether you're a student looking to enhance your academic performance, a professional aiming to upskill or reskill, or an enthusiast eager to explore new interests, Guidance Point is here to guide you every step of the way. What sets us apart is our commitment to excellence. We meticulously curate our course offerings, partnering with the best institutes and industry experts to ensure that you receive top-notch education that is both relevant and practical. Our platform leverages cutting-edge technology and innovative teaching methodologies to deliver engaging and immersive learning experiences.

BENEFITS:-

1. Comprehensive Course:

   Our comprehensive course ensures thorough coverage of essential topics, equipping you with a well-rounded understanding of your subject matter, setting a strong foundation for your future endeavors.

2. Top Institute Partnerships:

   Through our partnerships with leading institutes, you gain access to world-class resources, expert guidance, and prestigious

certifications, empowering you to excel in your field and stand out among your peers.

3. Advanced Learning Technology:

   Leveraging advanced learning technology, we offer dynamic and interactive learning experiences, incorporating simulations, virtual labs, and multimedia resources to enhance comprehension and retention of complex concepts.

4. Supportive Community:

   Join our vibrant and supportive community of learners, mentors, and industry professionals, where you can collaborate, seek advice, and find encouragement, fostering a conducive environment for growth and success.

5. Personalized Learning Paths:

   Tailor your learning journey to suit your unique needs and goals with our personalized learning paths, allowing you to progress at your own pace and focus on areas that align with your interests and career aspirations.

6. Quality Assurance Standards:

   Rest assured that our courses adhere to rigorous quality assurance standards, ensuring that you receive high-quality instruction, updated curriculum, and valuable resources that meet industry benchmarks and standards.

7. Interactive Learning:

   Engage in dynamic and interactive learning experiences through our immersive course content, live sessions, quizzes, and discussions, promoting active participation, collaboration, and deeper understanding of the material.

8. Career Opportunities:

   Explore abundant career opportunities and pathways in your chosen field, supported by our comprehensive curriculum, industry partnerships, and career services, empowering you to pursue your dream job and achieve professional success.

SYLLABUS

1: INTRODUCTION TO R PROGRAMMING LANGUAGE

- Overview of R: History, features, and applications
- Installing R and RStudio: Setting up the development environment
- Basics of R syntax: Variables, data types, operators, and expressions
- Introduction to RStudio IDE: Interface overview, script editor, console, and workspace
- Working with R packages: Installation, loading, and managing packages

2: DATA TYPES AND DATA STRUCTURES IN R

- Data types in R: Numeric, character, logical, and factor
- Introduction to vectors: Creating, indexing, slicing, and operations on vectors
- Understanding matrices: Creating, indexing, slicing, and operations on matrices
- Exploring lists: Creating, accessing, and manipulating lists
- Introduction to data frames: Creating, indexing, subsetting, and manipulating data frames

3: CONTROL STRUCTURES AND FUNCTIONS IN R

- Conditional statements: If-else, switch, and nested if-else statements
- Looping structures: for loops, while loops, and repeat loops
- Writing functions in R: Defining functions, parameters, return values, and function documentation (docstrings)
- Using built-in functions and applying functions to vectors and data frames
- Error handling with tryCatch blocks: Handling exceptions and errors in R code

4: DATA MANIPULATION WITH DPLYR AND TIDYR

- Introduction to the dplyr package: Data manipulation verbs (select, filter, arrange, mutate, summarize, and group_by)
- Reshaping data with tidyr: Gathering, spreading, and separating data for analysis
- Working with factors: Converting between data types, reordering levels, and handling missing values
- Combining and joining datasets: Merge, join, and concatenate operations using dplyr functions
- Advanced data manipulation techniques: Window functions, cumulative sums, and rolling averages

5: DATA VISUALIZATION WITH GGPLOT2

- Introduction to data visualization: Importance, types of plots, and principles of effective visualization
- Grammar of graphics: Understanding the ggplot2 syntax and components (data, aesthetics, layers, and scales)
- Creating basic plots: Scatter plots, line plots, bar plots, and histograms using ggplot2
- Customizing plots: Adding titles, labels, legends, and annotations to enhance visualizations

- Creating advanced plots: Faceted plots, heatmaps, box plots, and density plots using ggplot2 extensions

6: INTRODUCTION TO STATISTICAL ANALYSIS WITH R

- Descriptive statistics: Measures of central tendency, measures of dispersion, and summary statistics
- Probability distributions: Normal distribution, binomial distribution, and t-distribution
- Hypothesis testing: One-sample t-test, two-sample t-test, chi-square test, and ANOVA
- Regression analysis: Simple linear regression, multiple linear regression, and logistic regression
- Statistical inference: Confidence intervals, p-values, and interpreting statistical results

7: BUILDING BASIC MACHINE LEARNING MODELS WITH R

- Overview of machine learning: Supervised learning, unsupervised learning, and model evaluation
- Introduction to caret package: Machine learning workflow, preprocessing data, and model training
- Building classification models: Decision trees, random forests, support vector machines (SVM), and k-nearest neighbors (KNN)
- Building regression models: Linear regression, ridge regression, and lasso regression
- Model evaluation and validation: Cross-validation, confusion matrix, ROC curve, and model performance metrics