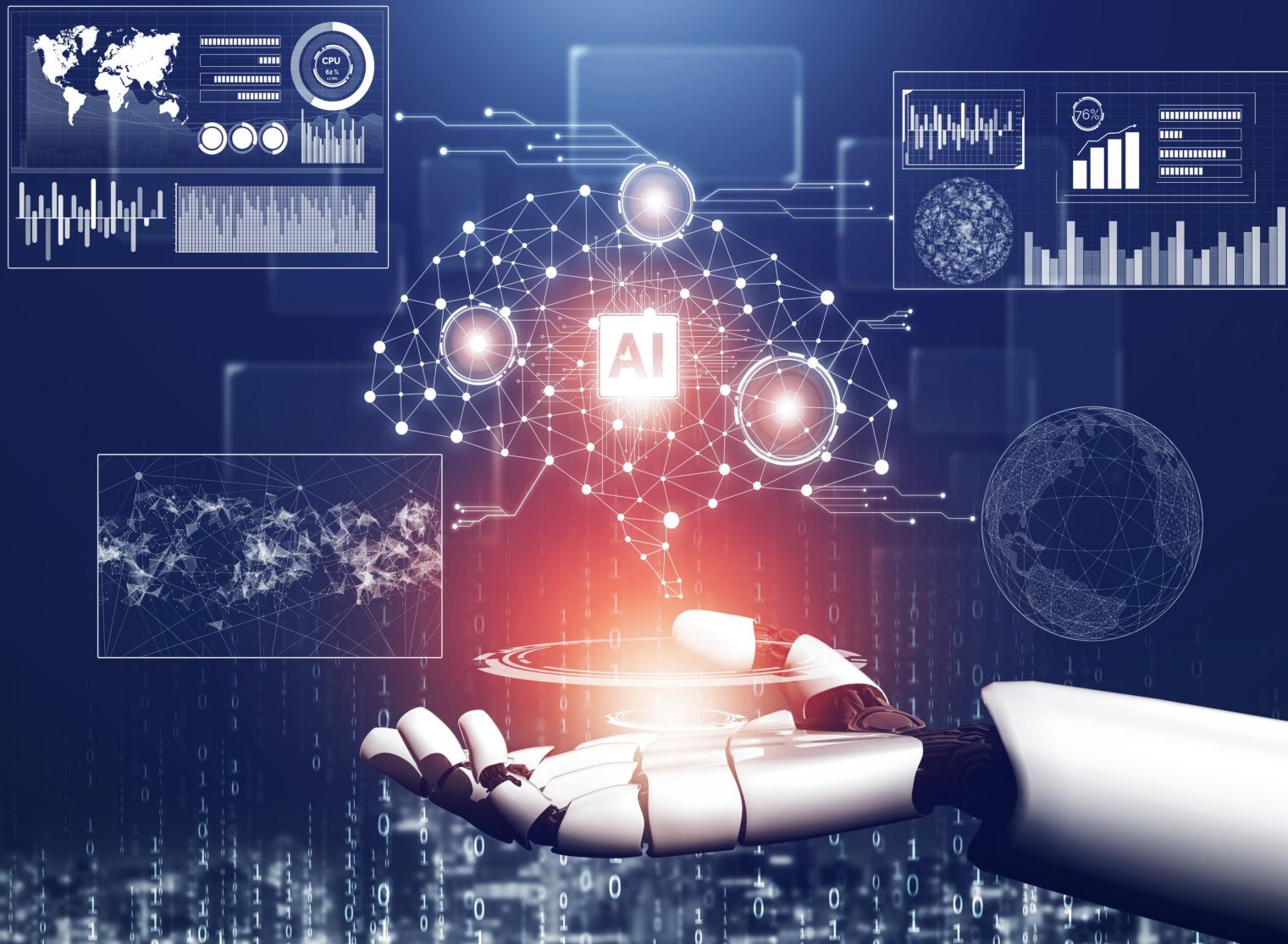


Learn Now,  
Pay Later...



# Data Science And Generative AI



## A B O U T   U S

# Empowering Careers, Fulfilling Dreams

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Our mission at Data Skills Hub is to empower individuals with the knowledge, skills, and opportunities needed to achieve their career aspirations. Through innovative education programs, personalized support, and industry connections, we strive to bridge the gap between learning and employment, enabling our students and professionals to realize their full potential and thrive in their chosen fields.

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# WHY DATA SCIENCE & GENERATIVE- AI

- Essential for extracting insights from large datasets.
- Empowers autonomous creation of realistic content.
- Companies seek professionals for diverse projects like predictive analytics and image generation.
- Skills are vital for data-driven decision-making and innovation.
- Data science encompasses predictive analytics, machine learning, and data visualization.
- Generative AI projects include image and text generation, enhancing creative processes.
- Skilled professionals command lucrative salaries due to their ability to drive innovation and deliver tangible business value.
- Demand exceeds supply, leading to competitive compensation packages.
- Offers dynamic career opportunities in diverse industries.
- Mastery ensures relevance in a rapidly evolving job market, with prospects for growth and advancement.



# CURRICULUM

## 1. PYTHON

- ▷ Introduction of Python
- ▷ Data Type
- ▷ Operators
- ▷ Type conversion
- ▷ List, Tuple, Dictionary
- ▷ Condition
- ▷ Loop

## 2. ADVANCE PYTHON

- ▷ OOPS
- ▷ Function

## 3. DSA

- ▷ Arrays
- ▷ Linked Lists
- ▷ Stacks & Queues
- ▷ Trees
- ▷ Tries & Heaps
- ▷ Searching & Sorting Algorithms
- ▷ Recursion
- ▷ Hashing & Two Pointers

## 4. ML TOOL BOX

- ▷ Pandas
- ▷ Numpy

## 5. SQL

- ▷ Introduction to Databases & BigQuery Setup
- ▷ Extracting data using SQE functions
- ▷ Filtering & Subqueries
- ▷ Date and Time Functions & CTEs (Common Table Expressions)
- ▷ GROUP BY & Aggregation
- ▷ Window Functions
- ▷ indexes & Partitioning
- ▷ joins

# 6. STATISTICS

- ▶ Probability
- ▶ Hypothesis Testing
- ▶ Bayes Theorem
- ▶ AB Testing
- ▶ Distribution
- ▶ ANOVA
- ▶ Descriptive Statistics
- ▶ Correlation
- ▶ outlier treatment
- ▶ EDA (Exploratory Data Analysis)
- ▶ Confidence Intervals
- ▶ Feature Engineering
- ▶ Central Limit Theorem
- ▶ Missing value treatment

# 7. MATH FOR MACHINE LEARNING

- ▶ Classification
- ▶ Optimization
- ▶ Hyperplanes
- ▶ Gradient Descent
- ▶ Halfspaces
- ▶ Principal Component Analysis
- ▶ Calculus

# 8. INTRODUCTION TO NEURAL NETWORKS & MACHINE LEARNING

- ▶ Introduction to Classical Machine Learning
- ▶ Logistic Regression
- ▶ Linear Regression
- ▶ Perceptron and Softmax Classification
- ▶ Polynomial Regression
- ▶ Introduction to Clustering
- ▶ Bias-Variance Tradeoff
- ▶ K-Means
- ▶ Regularization
- ▶ K-Means++
- ▶ Cross Validation
- ▶ Hierarchical Clustering

# 9. SUPERVISED LEARNING

- ▶ MLE (Maximum Likelihood Estimation)
- ▶ MAP (Maximum A Posteriori Estimation)
- ▶ Confidence Intervals
- ▶ Classification Metrics
- ▶ Imbalanced Data
- ▶ Decision Trees
- ▶ Bagging
- ▶ Naive Bayes
- ▶ SVM (Support Vector Machine)

# 10. UNSUPERVISED LEARNING & RECOMMENDER SYSTEMS

- ▶ Introduction to Clustering
- ▶ k-Means
- ▶ k-Means++
- ▶ Hierarchical Clustering
- ▶ Gaussian Mixture Models (GMM)
- ▶ Anomaly/Outlier/Novelty Detection
- ▶ PCA (Principal Component Analysis)
- ▶ t-SNE ( $t$ -distributed Stochastic Neighbor Embedding)
- ▶ Recommender Systems
- ▶ Time Series Analysis

# 11. SPECIALIZATION 2: DEEP LEARNING

- ▶ Neural Networks
- ▶ Perceptron
- ▶ Hidden Layers
- ▶ TensorFlow
- ▶ Keras
- ▶ Forward & Backward Propagation
- ▶ Multilayer Perceptrons (MLPs)
- ▶ Callbacks
- ▶ Tensorboard
- ▶ Optimization
- ▶ Hyperparameter Tuning

# 12. GENERATIVE AI

- ▷ Introduction of Generative AI
- ▷ Generative AI for Text Generation
- ▷ Generative AI for Machine Translation
- ▷ Generative AI for Creative Content Generation
- ▷ Advanced Topics in Generative AI with NLP
- ▷ LLMs: Use Cases and Potentials
- ▷ Hugging Face Hub: A Gateway to Generative AI
- ▷ Prompt Engineering: The Art of Guiding LLMs
- ▷ RAG: A Versatile Tool for Generative AI
- ▷ Fine-tuning: Unveiling the Potential of LLMs

# 13. Projects

- ▷ SQL Project
- ▷ Machine Learning Project
- ▷ Deep Learning Project
- ▷ Generative AI Project

Course Duration  
**6 months**

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# PROGRAMME **HIGHLIGHTS**

- Interactive Live Classes
- One to One Doubt Session
- Real-world case studies
- Pay after Placement
- Resume Building
- Interview Mock call Practice
- Support community

# PAY AFTER PLACEMENT

Unlock Career Opportunities With Our Professional End-to-end Service,  
Dedicated To Helping You Secure Your Dream Job  
Through Tailored Support And Expert Guidance.

## MOST POPULAR

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placement assistance.

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Repayment in 3 months

Secure packages exceeding 5+ LPA with  
our comprehensive training and  
placement assistance.

25000 ₹

Minimum 5+ LPA

Repayment in 3 months

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placement assistance.

45000 ₹

Minimum 10+ LPA

Repayment in 3 months

## Enrollment Fees : 10,000 ₹

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