



# GENERATIVE AI PROGRAM

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**RC**™ Ramaq  
Chools  
Consulting & Training

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# INTRODUCTION TO GENERATIVE AI

Hey there, future innovator! Generative AI is revolutionizing the creative landscape by generating novel content such as images, text, music, and videos. It leverages models that learn patterns from input data to create new data with similar characteristics. This dynamic field is rapidly growing with numerous subfields and emerging areas, including applications in drug and chip design and material science development.







# Why Choose Chools?

## Numbers That Speak for Themselves:

- 10,000+ Successful Alumni: Join a network of impactful professionals.
- 95% Job Placement Rate: Secure your future with Chools' proven track record.
- 20+ Years of Excellence: Trust in a legacy of education and industry expertise.
- 200+ Industry Partnerships: Leverage our connections for real-world insights and opportunities.

## What Sets Us Apart?


- **Expert Instructors:** Learn from industry veterans with hands-on experience.
- **Hybrid Learning Model:** Balance online flexibility with in-person engagement.
- **Comprehensive Curriculum:** Stay ahead with courses designed to meet market demands.
- **Community and Networking:** Be part of an active community of learners and professionals.

## Who Can Apply?

### Eligibility Criteria:

- **Eligibility Criteria:** Bachelor's degree or equivalent in computer science, engineering, mathematics, or a related field. Good command of English



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- **Ideal Candidates:** Professionals with a basic understanding of programming (Python, R, Java), familiarity with data analysis, statistics, and machine learning frameworks (TensorFlow, PyTorch, Scikit-learn), and a passion for creating innovative AI solutions.

## Program Overview

The Generative AI Program at Chools is structured to provide a comprehensive education in the field, combining theoretical knowledge with practical, hands-on experience. Our curriculum is divided into four progressive stages, each building on the previous one to ensure a thorough understanding of generative AI.

### Learning Mode:

- **Hybrid Learning Model:** Combines online learning with in-person sessions for flexibility and interactive engagement.
- **Interactive Sessions:** Includes live webinars, workshops, and Q&A forums with expert instructors and peers.
- **Self-paced Learning:** Access course materials anytime, allowing you to learn at your own pace.



## Skills Learned

- **Generative Models:** Understanding and implementing generative models.
- **Machine Learning Algorithms:** Advanced algorithms for generating novel content.
- **Artificial Intelligence (AI):** Concepts like NLP, computer vision, robotics, and deep learning.
- **Data Wrangling:** Cleaning and preparing data for AI models.
- **Data Visualization:** Creating impactful visualizations.
- **Statistical Inference:** Making data-driven decisions.
- **Programming Skills:** Proficiency in Python and relevant libraries.
- **AI Ethics:** Understanding responsible AI use.
- **Big Data Technologies:** Handling large datasets with Hadoop and Spark.
- **Cloud Computing:** Utilizing cloud platforms for AI tasks.

## Job Positions and Opportunities

- **Career Paths:** Generative AI Engineer, Machine Learning Engineer, AI Researcher, Data Scientist, AI Consultant, Computer Vision Engineer, NLP Engineer, Creative AI Developer.
- **Industry Demand:** High demand across various sectors, competitive salaries, and strong growth potential.

## Key Industry Verticals

- **Skill Application Areas:** Creative Industries, Healthcare, Technology, Marketing, Manufacturing, Energy, Education, Telecommunications, Logistics and Supply Chain, Government and Public Services.





## Program Objectives

- Master the technical skills required for generative AI.
- Implement advanced machine learning algorithms.
- Explore AI concepts including natural language processing and computer vision.
- Address real-world AI challenges.
- Understand the ethical considerations of AI.
- Foster continuous learning.
- Encourage teamwork and collaboration.
- Prepare for advanced roles in AI.

## Expected Outcomes

- Proficiency in generative AI tools and techniques.
  - Practical experience through hands-on projects.
  - Strong analytical and problem-solving skills.
  - Application of ethical AI practices.
  - Innovation in AI-driven solutions.
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# PROGRAM OUTLINE

## Stage 1: Fundamentals of Generative AI

### 1. Introduction to Generative AI

- o Core principles, tools, and industry applications.

### 2. Basics of Generative Models

- o Understanding and implementing basic generative models.

### 3. Introduction to AI Concepts

- o Overview of intelligent agents, NLP, and computer vision.

### 4. Python Programming for Generative AI

- o Python syntax, data handling, and essential libraries.

## Stage 2: Advanced Analytical Tools

### 5. Advanced Machine Learning Techniques

- o Deep learning, reinforcement learning, AI analytics.

### 6. Data Visualization for AI

- o Creating interactive visualizations and dashboards.

### 7. AI Ethics and Privacy

- o Ethical considerations, privacy laws, compliance strategies.

### 8. Intermediate Python for AI

- o Using advanced libraries for AI development.

## Stage 3: Practical Applications

### 9. Data Cleaning and Preprocessing

- o Techniques for ensuring data quality and reliability.

### 10. Exploratory Data Analysis (EDA) for AI

- o Analyzing data distributions, identifying patterns.

### 11. Advanced Data Integration Techniques

- o Integrating data from multiple sources.

### 12. Building Generative AI Models

- o Implementing and optimizing generative models.

## Stage 4: Capstone Project

### 13. Integration of Learned Skills

- o Apply tools and techniques to real-world AI problems.

### 14. Advanced Natural Language Processing (NLP)

- o Text analysis, sentiment analysis, topic modeling.

### 15. Computer Vision Techniques

- o Object detection, image classification, deep learning for CV.





# PROGRAM OUTLINE

## 16. Creative AI Applications

- o Developing AI for generating art, music, and other creative content.

### Elective Modules

## 17. Predictive Analytics with AI

- o Building and validating predictive AI models.

## 18. AI in Healthcare

- o Applying AI techniques to healthcare data and problems.

## 19. AI for Finance

- o Implementing AI solutions in financial services.

## 20. Big Data Technologies for AI

- o Using Hadoop and Spark for large-scale AI applications.

## 21. AI-Driven Decision Making

- o Using AI to inform and drive business strategies.

## 22. Cloud AI Solutions

- o Deploying AI models and services on cloud platforms.

## 23. AI Project Management

- o Leading AI projects, ensuring successful delivery.

## 24. Reinforcement Learning Applications

- o Advanced techniques and applications of reinforcement learning.

## 25. AI for Natural Language Processing (NLP)

- o Advanced text analytics and processing techniques.

### Enrollment Now Open!

Take the first step towards mastering generative AI. Enroll in our Generative AI Program and become a certified AI engineer with Chools