



# CYBER HOOKS

A C A D E M Y

Dedicated To Excellence  
AI & ML with Python

Session 2025-2026



# *Introduction*



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## **Welcome to Cyberhooks Academy**

At Cyberhooks Academy, we provide expert Artificial Intelligence and Machine Learning training to empower individuals and businesses with the skills of the future. Whether you want to build intelligent systems, create predictive models, or automate decision-making, our courses equip you with the right tools and techniques to excel in the AI & ML domain. Gain the knowledge to transform ideas into innovative solutions and drive success in today's AI-powered world!

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# *Modules of the course*

- Introduction to AI & ML
- Python for AI & ML
- Data Preprocessing
- Supervised Machine Learning
- Unsupervised Machine Learning
- Feature Engineering & Model Optimization





# *Module 1: Introduction to AI & ML*

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- What is Artificial Intelligence?
- History and evolution of AI
- Difference between AI, ML, and Deep Learning
- Real-world applications of AI & ML
- AI ethics and responsible AI





# *Module 2: Python for AI & ML*

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- Python basics refresher (variables, loops, functions, OOPs)
  - Working with Jupyter Notebook
  - Libraries for AI/ML:
    - NumPy – numerical computing
    - Pandas – data handling
    - Matplotlib/Seaborn – data visualization
  - Hands-on: Exploratory Data Analysis (EDA) with Python





# *Module 3: Data Preprocessing*

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- Understanding datasets (structured & unstructured)
- Handling missing data
- Encoding categorical variables
- Feature scaling (Normalization & Standardization)
- Train-test split, cross-validation
- Hands-on: Cleaning and preparing datasets



# Module 4: Supervised Machine



## Learning

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- Regression Algorithms
  - Linear Regression
  - Polynomial Regression
  - Regularization (Ridge, Lasso)
- Classification Algorithms
  - Logistic Regression
  - K-Nearest Neighbors (KNN)
  - Decision Trees & Random Forest
  - Support Vector Machines (SVM)
- Model evaluation metrics: Accuracy, Precision, Recall, F1-score, ROC-AUC
- Hands-on Projects:
  - Predicting house prices (Regression)
  - Spam email detection (Classification)



# Module 5: Unsupervised Machine Learning

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- Clustering algorithms:
  - K-Means
  - Hierarchical Clustering
  - DBSCAN
- Dimensionality Reduction:
  - PCA (Principal Component Analysis)
  - t-SNE
- Hands-on Project: Customer segmentation



# Module 6: Feature Engineering & Model Optimization

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- Feature selection techniques
- Handling imbalanced datasets (SMOTE, Class Weights)
- Hyperparameter tuning (Grid Search, Random Search)
- Pipelines in Scikit-Learn
- Hands-on: Improving model performance



# Our Training Partners

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## EC - Council

EC-Council offers globally recognized cybersecurity certifications, including CEH, CND, and ECIH, to help professionals advance in the field.



## N.S.D.C

NSDC is a government-backed organization in India focused on enhancing skill development and vocational training to boost employability.



## Skill India

Skill India is an initiative by the Indian government aimed at providing youth with skills training to enhance employability and drive economic growth.



## Nasscom

NASSCOM is India's trade association for the IT and BPO industries, driving growth and innovation.

# *Job Assistance Training*

## **Business Communication:**

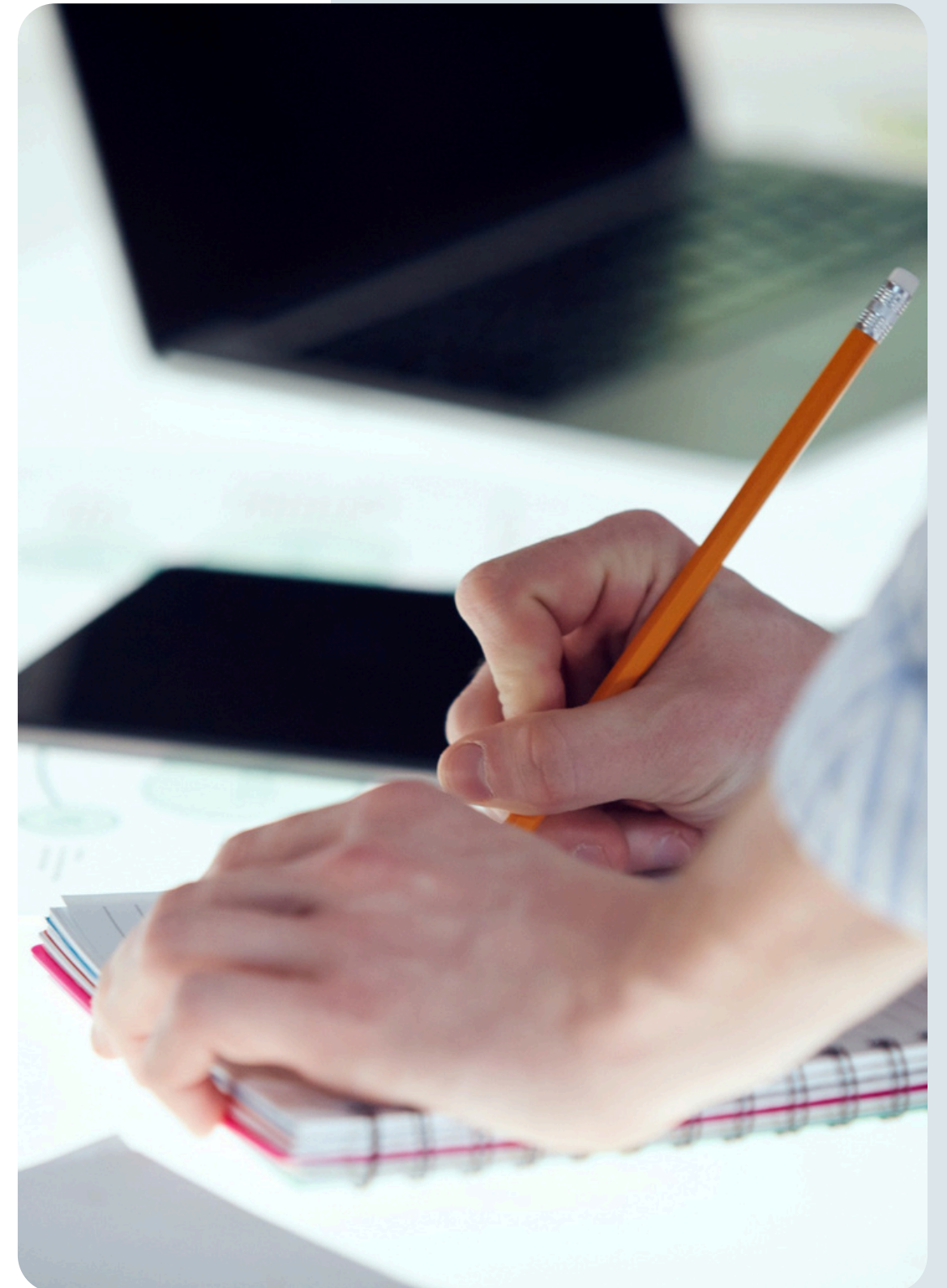
- Business communication involves sharing information within and outside the organization to achieve goals and foster relationships.
- It includes written, verbal, and digital methods, requiring clarity, listening, and adaptability.

## **Personality Development:**

- Personality development involves improving character, behavior, communication skills, and emotional intelligence for personal and professional growth.
- It focuses on building self-confidence, enhancing relationships, and developing a positive mindset.

## **Interview Training:**

- Interview training helps you prepare for job interviews by improving communication, answering techniques, and showcasing your strengths.
- It focuses on building confidence, handling common interview questions, and mastering professional body language



# *T Oeuarm P Mlaecmedb eSrtsudents*



Lakshya  
Jonwal



Vikram  
Rathod



Vikram  
Rathod



Arpan  
Dewadi



Sahil  
Maan



Anuj



# Our Hiring Partners

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# Get in Touch with us.



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"Get in touch with us today to learn more and take the next step toward success!"



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*Join us for  
Better Future*

