Centre for Skill Development

REPORT ON CERTIFICATE COURSE IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Event Name: Fundamental Course in Artificial Intelligence and Machine Learning

Date: 30/12/2024 to 03/03/2025

Centre/Society/Department: Centre for Skill Development (CSD), Shyam Lal College, University of Delhi

Program Convenor/Coordinator: Prof. Kavita Arora (Convenor, CSD, SLC)

Resource Person: National Institute of Electronics & Information Technology (NIELIT), Delhi

Collaborations: National Institute of Electronics & Information Technology (NIELIT)

The academic session 2024-25 at Shyam Lal College marked a significant advancement in skill development with the introduction of the Artificial Intelligence and Machine Learning course from both online and offline mode. The course was conducted during Feb-March, 2025, alongside three other short-term courses, highlighting the institution's commitment to providing cutting-edge education in emerging fields.

This course was designed to equip students with foundational and advanced knowledge in AI and ML, preparing them to excel in a technology-driven world. The curriculum covered key concepts such as data analysis, neural networks, deep learning, and practical applications of AI and ML in various industries. The structured program ensured that students gained both theoretical understanding and hands-on experience, making them proficient in these transformative technologies.

The course received an enthusiastic response, with a significant number of students enrolling to enhance their technical skills and career prospects. The overwhelming participation reflects the growing awareness of the importance of AI and ML in modern careers and the eagerness of students to stay ahead in the competitive job market.

By offering this course, Shyam Lal College has reinforced its role as a pioneer in skill development and its commitment to providing students with the tools necessary to thrive in an increasingly digital and automated

Duration (In Hours): 30 Hours/3 Weeks (@ 2 hours Daily)

Course contents

Unit 1: Artificial Intelligence

Introduction to Artificial Intelligence (AI), Current Trends & Terminologies in AI, Applications and Challenges in AI.

Unit 2: Python Programming

Introduction to Python, Python Data types, Statements & expressions, Flow control & loops, Lists, and dictionaries.

Unit 3: Exploratory Data Analysis

Numpy Library: Array types, Array slicing, Universal functions, Aggregations, N-Dimensional arrays, sorting arrays, loading data in Numpy from various formats.
Pandas Library: Pandas objects – Series and Data frames, Data indexing and selection, NaN objects, Manipulating Data Frames, Grouping, filtering.
Visualizations with Matplotlib Library using various charts such as Bar Graphs, Histogram, Scatter Plot, Area Plot, Pie Chart.
Feature Engineering: Numeric & Categorical features, Normalization, Min Max Scaling, Standardization, Imputation.

Unit 4: Machine Learning

Introduction to Machine Learning, Algorithm types of Machine learning, Supervised Learning – Classification with Logistic Regression, Regression with Linear Regression, Unsupervised Learning – Clustering with K-Means.

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ADD ON COURSES

CERTIFICATE COURSE IN FOREIGN LANGUAGES
(UNDER THE AEGIS OF UNIVERSITY OF DELHI)
FRENCH SPANISH JAPANESE
GERMAN KOREAN CHINESE
ITALIAN
Duration: 1 Yr

DIPLOMA COURSE IN FOREIGN LANGUAGES
(UNDER THE AEGIS OF UNIVERSITY OF DELHI)
FRENCH SPANISH JAPANESE
GERMAN KOREAN CHINESE
ITALIAN
Duration: 1 Yr

ADVANCED DIPLOMA IN FOREIGN LANGUAGES
(UNDER THE AEGIS OF UNIVERSITY OF DELHI)
FRENCH SPANISH JAPANESE
GERMAN KOREAN CHINESE
ITALIAN
Duration: 1 Yr

CERTIFICATE COURSE IN STOCK TRADING
(UNDER THE AEGIS OF UNIVERSITY OF DELHI)
"Stock Selection Through Fundamental & Technical Analysis"
(In collaboration with BSE Institute Ltd.)
2 months

ELIGIBILITY: 10+2

NATIONAL INSTITUTE OF ELECTRONICS & INFORMATION TECHNOLOGY
Autonomous Scientific Society of Ministry of Electronics and Information Technology (MeitY), Government of India

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IT COURSES

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- **OFFICE AUTOMATION**
- **ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

SHORT TERM COURSES 40 - 60 Hours
NOMINAL PRICE

SCAN QR
TO REGISTER

For Detailed Guidelines of All Courses : https://bit.ly/guidelines2024-25

Prof. Kavita Arora
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Prof. Rabi Narayan Kar
(Principal)

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