Zakir Husain Delhi College
(University of Delhi)

announces

A Certificate Course
on
Foundations of Machine Learning

ABOUT THE COURSE

In the rapidly advancing world of technology, machine learning has emerged as a key driver of innovation, influencing diverse domains, from healthcare to finance. To empower individuals with the foundational knowledge needed to navigate this transformative landscape, we present a comprehensive 40-hour certificate course on the Basics of Machine Learning. This course is designed to provide participants with a solid understanding of essential concepts, hands-on experience, and the ability to apply machine-learning techniques to real-world scenarios.

WHO SHOULD PARTICIPATE

UG/PG students, Researcher scholars.

IMPORTANT DATES

Deadline for registration: 25-02-2024
Selection intimation: 29-02-2024
Commencement of course: First week of March 2024 (tentative)

ABOUT THE COLLEGE

Zakir Husain Delhi College is one of the leading colleges of the University of Delhi, imparting higher education in Science, Commerce, Humanities, and Social Sciences. The college has the distinction of existence well before the University of Delhi. It carries within itself a history of nearly 300 years as an institution of learning. The college was affiliated with Delhi University in 1925 and became one of its constituent degree colleges. Following the partition of India, the Delhi College was revived as a non-denominational institution in 1948. It was renamed Zakir Husain College in 1975 and managed by the Zakir Husain Memorial Trust under the Chairmanship of the Prime Minister of India. The present Chairman of Zakir Husain Memorial Trust is our Hon'ble Prime Minister Shri Narendra Modi, and the Vice-Chairman is Shri Dharmendra Pradhan, Minister for Education and Skill Development and Entrepreneurship. Today, the college runs undergraduate courses in 21 disciplines and offers 17 postgraduate courses. The solid academic structure is complemented by various societies, giving students a platform to nurture their talents in drama, music, dance, art, and sports. The college has state-of-the-art laboratories, ICT-enabled classrooms, a fully automated, air-conditioned, rich library, and a centrally air-conditioned auditorium. Besides well-maintained lawns and parks, the college houses ecological spaces for students and herbal, rose, and rock gardens, which are well-recognized in the Annual Flower Show of Delhi University. Students can also explore their caliber and interest in outdoor and indoor games. By July 2024, a new nine-story building with bright classrooms, state-of-the-art laboratories, and IT infrastructure will be added to the current infrastructure as an expansion facility.

COURSE EXPERTS

Prof. (Dr.) Shikha Mehta:
Prof. (Dr.) Shikha Mehta is currently a Professor in the Department of Computer Science Engineering at Jaypee Institute of Information Technology, Noida. She attained her doctorate in the domain of Artificial Intelligence from the University of Delhi, Delhi. I have over 19 years of teaching experience. She has been actively involved as a reviewer for many International Journals and Conference Proceedings. She has published around 70 research publications, including Journal articles, conference proceedings, and book chapters.

Prof. (Dr.) Sanjay Yadav:
Dr. Sanjay Yadav is a Professor at the University of People, United States. Dr. Yadav has also been working as a tutor for the BITS-WILP Programme for working professionals for the last three years. Dr. Yadav holds a PhD in mathematics from the Indian Institute of Technology Roorkee (IIT Roorkee). He completed his Graduation and master's in mathematics. His research area is Data security. Dr. Yadav has more than ten years of national and international teaching and research experience. In his work, he guided 20 master's and 2 PhD for their final thesis.

Dr. Pravesh Kumar:
Dr. Pravesh Kumar is working as an Assistant Professor at the Department of Mathematics, Rajkiya Engineering College, Bijnor (AKTU Lucknow affiliated Govt. Engineering College). He did an M.Sc. (Mathematics) from CCSU Meerut and an M.E. (Software Engineering) from Thapar University Patiala. He has achieved his Ph.D. in Soft Computing from IIT Roorkee. His research interests include the enhancement of Evolutionary and Swarm based intelligence algorithms for optimization. He has published ten SCI/SCIE/Scopus journal papers, three book chapters, 15 conference proceedings papers, and many others.

Industry Experts

Dr. Shashi Barak:
Dr. Shashi Barakis is the associate AI principal at Accenture Operations, based in California. She has more than 13 years of academic and industrial experience delivering a return on investment through Artificial Intelligence and Machine learning techniques. She authored many journals, conference papers, and book chapters. She has an expert ability to understand business problems and build analytical AI-based models. She completed her Ph.D. from IIT Roorkee and her post-doctorate from IISc Bangalore.

Mr. Sachin Dubbal:
Sachin Dubal is a seasoned tech leader with over 19 years of industrial experience. Holding a postgraduate degree in Informatics from the Institute of Informatics and Communications at Delhi University, Sachin brings a wealth of knowledge and expertise to his role. Currently serving as a Senior Tech Leader at Cisco Systems in San Jose, Sachin spearheads the development of platform infrastructure for Cisco's next-generation Catalyst switches. With a solid academic background and extensive industry experience, Sachin is at the forefront of driving innovation in networking technology.

Course Outline

Introduction to Machine Learning: The journey begins with exploring the fundamental principles of machine learning. Participants will gain insights into the different types of machine learning, understand its historical evolution, and grasp the key concepts that underpin the field.

Fundamentals of Data and Statistics: A solid understanding of data is crucial in machine learning. This week delves into data preprocessing techniques, covering data cleaning, transformation, and encoding. Additionally, participants will be introduced to basic statistical concepts essential for interpreting and analyzing data.

Supervised Learning – Regression: Building on the foundation laid in the previous weeks, participants will delve into supervised learning. The focus will be on regression techniques, starting with an introduction to regression concepts and progressing to an in-depth exploration of linear regression, including its assumptions and model evaluation metrics.

Supervised Learning – Classification: This week shifts the focus to classification, a key aspect of supervised learning. Participants will gain a conceptual understanding of binary and multiclass classification, explore common classification algorithms such as logistic regression, decision trees, and random forests, and learn how to evaluate classification models.

Unsupervised Learning: Unsupervised learning techniques, including clustering and dimensionality reduction, take center stage this week. Participants will discover how algorithms like K-Means clustering and PCA can be applied to uncover patterns in unlabeled data.

Model Evaluation and Hyperparameter Tuning: To ensure the effectiveness of machine learning models, participants will delve into model evaluation techniques, including cross-validation. Additionally, the importance of hyperparameter tuning for optimizing model performance will be explored, providing participants with the tools to fine-tune their models.

Introduction to Machine Learning Libraries and Applications: As the course nears completion, participants will be introduced to popular machine learning libraries such as Scikit-Learn and TensorFlow. Real-world applications and case studies will showcase the diverse and impactful ways machine learning is applied across various industries.

Apply Now

The registration process may be completed using the link below or by scanning the given code. https://forms.gle/sTwFRaXPik4Haprd7

SCAN ME

REGISTRATION FEE:
Research Scholar/Students: Rs. 500/-
The registration fee will be paid online with the following details:

Name of the Account Holder: ZHDC Boys Fund
Bank Name: Canara Bank
Account Number: 8668101000002
IFSC Code: CNRB0008668

Contact: dbtstarcollege@zh.du.ac.in

Why choose us?

MODE OF CONDUCTION OF COURSE: Hybrid Mode

Assessment and Certification: Assessment throughout the course, including quizzes, assignments, and a final project or case study, will allow participants to showcase their understanding and practical application of machine learning concepts. Upon successful completion, participants will be awarded a certificate, validating their newfound knowledge of the foundational aspects of machine learning.

Embark on this 40-hour journey into the realm of machine learning, where theory meets practice, and participants emerge equipped with the skills to leverage machine learning in their professional endeavors. Join us in building the foundations for a future shaped by data-driven insights and intelligent decision-making.

Course Coordinator:
Dr. Dhiraj Kumar Singh
Department of Mathematics

Patron:
Prof. Narendra Singh
Principal
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JLN Marg, Delhi 110002