



ONE WEEK ONLINE FACULTY
DEVELOPMENT PROGRAM (FDP)

ON

**EXPLORING AI USING
IBM WATSON AND
GOOGLE COLAB**

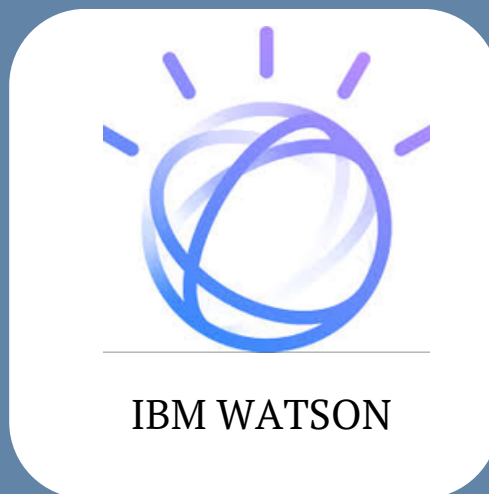
03 Feb 25 to 08 Feb 25

Organized by

Department of Computer Science &
Engineering

Faculty of Engineering & Technology

Gurukula Kangri Deemed to be University
Haridwar, Uttarakhand



Topics to be Covered

Introduction to AI, IBM Watson
PyTorch Fundamentals
PyTorch workflow
Neural Network Classification using PyTorch
Computer Vision
Transfer Learning,
LLMs, Sentiment Analysis
Blockchain and AI
Introduction to IBM Cloud
Experimenting with IBM Watson
Building Applications Using Watson and
Google Colab

Registration

How to Register

There is **no registration fee**. Registration can be done from AICTE ATAL portal.

Who Can Register

Post Graduate Students/ Research Scholars/
Faculty Members / Industry Professionals

Eligibility Criteria

Certificates will be given after fulfilling the following criteria:

- Attendance - 80% Minimum
- Score in Weighted Evaluation-70%
- Feedback against attended FDP

Coordinator:

Prof. Mayank Aggarwal
Professor & Head, CSE, Gurukula Kangri
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RESOURCE PERSONS FROM INDUSTRY



Dr. Mani Madhukar
Program Lead
IBM Innovations Center, India



Ms. Shikha Maheshwari
Senior Software Architect
IBM



Mr. Lalit Pant
Creator of Kojo & Kojo-AI
Managing Trustee, Kogics
Foundation



Mr. Anupam Sorabh
Founder & Solutions Head
Machadalo



Mr Nitin Jain
Co-Founder, Assert AI
B.Tech IIT Bombay, EPGM IIM
Calcutta



Mr. Kshitij Mathur
Senior ML Engineer
CapitalOne

RESOURCE PERSONS FROM ACADEMIA



Dr. Sudeep Tanwar
Professor
Nirma Univ., Ahemdabad



Dr. Mala Kalra
Assistant Professor
NITTTR, Chandigarh



Dr. Shelly Sachdeva
Professor
NIT, Delhi



Dr. Anshul Verma
Assistant Professor,
BHU, Varanasi

RESOURCE PERSONS FROM OVERSEAS



Dr. Noor Zaman Jhanjhi
Professor,
Taylor's University, Malaysia



Dr. Simona Raboaca
Professor,
University of Suceava, Romania
Europe

ABOUT THE COORDINATOR



Dr. Mayank Aggarwal

is currently working as Professor & Head of the Department, Computer Science & Engineering at Faculty of Engineering & Technology, Gurukul Kangri University, Haridwar. Has an experience of 20 years in Academia. Have been awarded by IBM as TGMC Mentor award and designated as IBM Cloud Consultant in 2015. Has been awarded with IBM Practitioner badge for generative AI and Awarded by IBM Generative AI Faculty award 2023. Have conducted more than 100 workshops/training for Teachers / Faculty in entire country for Cloud Computing / Blockchain.

ABOUT THE CO-COORDINATOR



Dr. Suyash Bhardwaj

Currently working as Assistant Professor in Department of Computer Science & Engineering, Faculty of Engineering & Technology, Gurukula Kangri Vishwavidyalaya, Haridwar. Have an experience of more than 12 years in academics and research. Have been awarded with Uttarakhand Gaurav Samman, Best Teacher awards, Top Performing Mentor and many others. Have delivered more than 30 invited talks, conducted many workshops on Design Thinking, IPR, Innovation and Research Methodology.

About the University

Gurukula Kangri established in 1902 is a deemed to be university-funded by the UGC, Govt. of India. It has three Campuses—Main Campus (Haridwar), Kanya Gurukula Campus (Haridwar) and Kanya Gurukula Campus (Dehradun) with Ten faculties—Oriental Studies, Humanities, Science, Life Science, Management Studies, Technology, Engineering & Technology, Medical Science & Health and others. It was the first Non-British University to be established in India in 1902 by Swami Shraddhanandji. It was established to impart education through the traditional Indian Gurukula System with synthesis between timeless ancient Indian thought and modern science. The distinguished services of this institution to the nation were recognized and it was given the status of Deemed to be University in 1962 by University Grants Commission..

About FET

In the year 2000 Faculty of Engineering & Technology was established with an aim of imparting technical education in the spiritual surroundings of the Gurukula System. Keeping in mind the importance of technocrats with strong moral character, superior knowledge, and devotion to the nation. FET was established with a motto of Building Technocrats with ethics. FET is known in India and abroad for students with virtuous moral character and Technical abilities. Currently, it is providing education in B. Tech. in Computer Science & Engineering, Electronics & Communication Engineering, Electrical Engineering, and Mechanical Engineering. FET is one of the richest faculty of Gurukula Kangri (Deemed to be University), with a huge number of books in the library, well-equipped electronics electrical and mechanical laboratories, latest software, and computers in computer labs. Football field, Tennis court, Volleyball court, Basketball arena, and open gym for the students with athletic interests.

Objective

This Faculty Development Program (FDP) aims to advance the competencies and expertise of postgraduate students, researchers, faculty members, and scientists willing to learn Artificial Intelligence (AI) and its practical implementations. Spanning a week, this FDP will encompass lectures, hands-on lab sessions utilizing Python, Google Colab, IBM Watson, etc., and critical analysis of two high-impact research papers in AI. Distinguished guest speakers from industry, Academia, and research sectors will provide insights into cutting-edge trends and real-world AI applications, enhancing participants' understanding and preparedness for contemporary AI challenges.

Outcomes

Participants will gain advanced knowledge in AI theory and applications, proficiency in AI tools like Python and IBM Watson, analytical skills through research article evaluations, and industry insights from expert speakers. This holistic learning approach will empower participants to contribute effectively to AI research, development, and deployment, fostering innovation and excellence in AI-driven solutions across diverse domains.

Theme and Scope

The one-week FDP on Artificial Intelligence will gather a group of experts from the fields of AI, Machine Learning, Deep Learning, Computer Vision, etc., at FET Haridwar. This scientific and technological event aims to bring together professionals from FET, NIT, IIIT, industry, AICTE approved engineering colleges, and individuals working in related industries. Additionally, it targets students and researchers in information technology, computer science & engineering, and related areas. We have significantly expanded the scope of the workshop, including talks and tutorials on cutting-edge topics related to Artificial Intelligence and its applications.

Topics to be Covered

This FDP will assist you in learning the foundations of Artificial Intelligence and Python, understanding how to build AI models, and learning how to deploy these models. With this objective in mind, we have proposed the following topics (but not limited to) to be discussed during the FDP:

- Introduction to AI, it's use in healthcare and PyTorch Fundamentals
- PyTorch workflow
- Neural Network Classification using PyTorch
- Computer Vision and it's use in healthcare with PyTorch
- Transfer Learning, Going Modular, Experiment
- Tracking, Model Deployment of AI Healthcare models
- Recurrent Neural Network
- LSTM
- Introduction to IBM Cloud / IBM Watson
- Experimenting with IBM Watson

Pedagogy

The FDP will be an interactive FDP , which will be run with a focus to get an output in the form of Patent/Paper/Product along with the knowledge gained by experts from Industry and Academia. It will cover basics of AI with hands-on experience with python(PyTorch) and IBM Watson to learn and use Artificial Intelligence to solve problems in the real life. It will cover case studies and research article for two them AI in Education and Healthcare. All sessions are meticulously planned so that at the end learners would be able to apply these learning to get the desired goal/outcome. Moreover concepts of flipped classes will be used in some sessions to make participants trained on new ways of learning and teaching

Certification

Certificates will be given after fulfilling the following criteria:

- 1.Attendance - 80% Minimum
- 2.Score in Weighted Evaluation-70%
- 3.Feedback against attended FDP

ATAL Online 6 Day Faculty Development Programme Schedule

***There is no registration fee**

FDP Title: Exploring AI using IBM Watson and Google Colab

Start Date: 03/02/2025

End Date: 08/02/2025

Day 1	Day 2	Day 3	Day 4	Day 5	Day 6
<p>6:00 PM to 6:30 PM</p> <p>Inaugural Session</p>	<p>6:00 PM to 7:30 PM</p> <p>Session 3 Name of the Expert: Dr.Mala Kalra Designation: Professor Organization: NITTTTR Chandigarh Experience in Years: 20 Topic to be taught: Data Visualization Using Python</p>	<p>6:00 PM to 7:30 PM</p> <p>Session 5 Name of the Expert : Dr. Maria Simona Raboaca Designation: Professor Organization: University of Suceava, Romania, Europe Experience in Years: 22 Topic to be taught: AI in IoT for Sustainable Energy Systems</p>	<p>6:00 PM to 7:30 PM</p> <p>Session 7 Name of the Expert: Dr. Shelly Sachdeva Designation: Associate Professor Organisation: NIT-Delhi Experience in Years: 20 Topic to be taught: Using Gocolab for AI applications</p>	<p>6:00 PM to 7:30 PM</p> <p>Session 9 Name of the Expert : Ms.Shikha Maheshwari Designation : Senior Software Architect Organization: IBM Experience in Years: 18 Topic to be taught: Sentiment Analysis and generative AI using IBM Watson</p>	<p>2:00 PM to 3:30 PM</p> <p>Session 11 Name of the Expert : Mr Nitin Jain. Designation: Co-Founder Assert AI. Organization:Assert AI Experience in Years: 20. Topic to be taught: Transfer Learning and Deployment</p>
<p>6:30 PM to 8:00 PM</p> <p>Session 1 Name of the Expert : Dr. Mayank Aggarwal Designation: Professor Organization: Gurukula Kangri Vishwavidyalaya Experience in Years: 20 Topic to be taught: Introduction to AI and IBM Watson</p>	<p>7:30 PM to 9:00 PM</p> <p>Session 4 Name of the Expert : Mr Anupam Sorabh Designation : Founder & Solutions Head at Machadalo Organization: Machadalo Experience in Years: 16 Topic to be taught: Introduction to Google Collab and PyTorch</p>	<p>7:30 PM to 9:00 PM</p> <p>Session 6 Name of the Expert: Mr Lalit Pant Designation: Founder & Creator of Kojo and Kojo AI. Managing Trustee, Kogics Foundation Organization: Kogics Foundation. Experience in Years:20 Topic to be taught: Learning Neural Networks</p>	<p>7:30 PM to 9:00 PM</p> <p>Session 8 Name of the Expert : Mr Kshitij Mathur Designation: Senior ML Engineer Organization: CapitalOne Experience in Years:10 Topic to be taught: Introduction to Computer Vision and it's Applications</p>	<p>7:30 PM to 9:00 PM</p> <p>Session 10 Name of the Expert : Dr. Noor Zaman Designation: Professor Organization:Taylor's University, Malaysia Experience in Years: 24 Topic to be taught: Security and Generative AI: its challenges and Solutions</p>	<p>3:30 PM to 5:00 PM</p> <p>Session 12 Name of the Expert: Dr. Anshul Verma Designation: Assistant Professor Organization: BHU, Varanasi Experience in Years: 10 Topic to be taught: Workflow Scheduling in Cloud Computing</p>
<p>8:00 PM to 9:30 PM</p> <p>Session 2 Name of the Expert: Dr.Mani Madhukar Designation: Program manager Organization: IBM Experience in Years: 16 Topic to be taught: Exploring IBM Watson</p>					<p>5:00 PM to 6:30 PM</p> <p>Session 13 Name of the Expert : Dr. Sudeep Tanwar Designation: Professor Organization: Nirma University Experience in Years: 20 Topic to be taught: Blockchain for 5G and Beyond</p>
					<p>6:30 PM to 7.30 PM</p> <p>Online Test & Feedback</p>
					<p>7:30 PM to 8:00</p>