

# Artificial Intelligence/Artificial Wisdom - A Drive for Improving Behavioral and Mental Health Care

(06 September to 10 September 2021)

Department of Computer Science & Information Technology  
Central University of Jammu, J&K-181143

## Preamble

An Artificial Intelligence is the capability of a machine to imitate intelligent human behaviour. Machine learning is based on the idea that machines should be able to learn and adapt through experience. Machine learning is a subset of AI. That is, all machine learning counts as AI, but not all AI counts as machine learning.

Artificial intelligence (AI) technology holds both great promises to transform mental healthcare and potential pitfalls. Artificial intelligence (AI) is increasingly employed in healthcare fields such as oncology, radiology, and dermatology. However, the use of AI in mental healthcare and neurobiological research has been modest. Given the high morbidity and mortality in people with psychiatric disorders, coupled with a worsening shortage of mental healthcare providers, there is an urgent need for AI to help identify high-risk individuals and provide interventions to prevent and treat mental illnesses. *According to the publication Spectrum News, a form of AI called "deep learning" is sometimes better able than human beings to spot relevant patterns.*

This five days course provides an overview of AI approaches and current applications in mental healthcare, a review of recent original research on AI specific to mental health, and a discussion of how AI can supplement clinical practice while considering its current limitations, areas needing additional research, and ethical implications regarding AI technology. The proposed workshop is envisaged to provide opportunity to our learners to seek and share knowledge and teaching skills in cutting edge areas from the experienced and reputed faculty. Thus, the future AI or Artificial Wisdom (AW) could provide technology that enables more compassionate and ethically sound care to diverse groups of people.

## About the University

The Central University of Jammu has been established by the Central Universities Act 2009 (Act No 25 of 2009) read with the Central Universities (Amendment) Act, 2009. Central University of Jammu in a short span of time has been able to carve a niche for itself at regional as well at national level. The profile of the University clearly reflects a host of activities executed by different departments/centres in terms of academic, extension and research. The Central University of Jammu came into existence with a mandate to be one of India's leading universities offering innovative, responsive and high quality educational opportunities at

undergraduate, post graduate and research levels. The Central University of Jammu started functioning from 08<sup>th</sup> August 2011 with just three Post Graduate courses and one research programme. Presently, the University is offering 34 programmes: 04 integrated five year programmes, 15 Post Graduate, 12 researches oriented and 02 Vocational types at Under-graduate level under the aegis of 13 Departments. One Diploma course is being offered by the Community College established in 2015. Recently, the University has succeeded in establishing one Chair, "The Swami Vivekananda Chair" as sanctioned by the UGC. Needless to say, that the Central University of Jammu is among the few Universities of our country which has been granted this Chair. The main campus of the University is situated at Rahya Suchani (Bagla), in the Samba district of Jammu division.

## Department of Computer Science & IT

The Department of Computer Science & Information Technology under the aegis of School of Basic & Applied Sciences was established in the year 2012. Initially the Department started offering M.Sc.(Computer Science) programme with an intake of 30 seats. Later in the year 2013, the programme was renamed as Integrated M.Sc.(Computer Science)-MCA. Three batches of MCA have successfully passed out till the year 2017.

Keeping in the view the research output, market scenario and industry requirements the Department started offering M.Tech. (Computer Science & Technology) programme with an intake of 24 seats and discontinued the Integrated M.Sc.(Computer Science)-MCA programme from the session 2016-17. The M.Tech. programme has been approved by AICTE from the session 2017-18. The Department has also started Ph.D. research programme from the academic session 2016-17.

Faculty members of the Department have specialized areas for advanced studies and research in Software Engineering, Wireless Sensor Networks, Computer Networks, Database and Data Mining, Natural Language Processing, Information and Cyber Security, Image Processing, Pattern Recognition, Internet of Things, Cloud Computing, Robotics and Simulation & Modelling.

The Department is well equipped with state-of-the-art laboratories of all major domains of Computer Science and Information Technology with excellent internet, servers, hardware and software support.

Students of the Department get selected for higher studies in most reputed Universities and Institutes. The Department is equally active in research with many quality publications each year in IEEE, Science direct, ACM, Springer, Wiley etc.

## Target Participants and Selection Criteria

The Faculty Development Programme will be open for all the faculty members of Colleges/ Institutes/ Universities, Researchers, PG Scholars, participants from Government, Industry (Bureaucrats/Technicians/Participants from Industry etc.), staff of host institutions. The selection of participants will be done based on first-cum-first-serve basis and the confirmed candidates will be notified immediately. Maximum 200 participants will be allowed to attend online FDP on a first come first serve. Once this number is reached, registration will be closed. The list of selected participants will be sent to their personal e-mail ids. A small test will be conducted at the end of the course. A minimum 80% attendance is required and a score of minimum 60% in the test to be eligible for the certificate. Candidates will be issued certificates on successful completion of the course along with grade.

## Venue of the FDP

Department of Computer Science and Information Technology,  
Central University of Jammu,  
Bagla( Rahya-Suchani), Distt: Samba  
J&K-181143

## Duration

The FDP will be a hands-on short term course of one week duration (5 working days) with timing from 10:00 a.m. to 5:00 p.m. The proposed dates for the FDP are from 06-09-2021 to 10-09-2021.

## Scheduled Plan

<b>Dates</b>	<b>10:00 AM to 11:30 AM</b>	<b>11:30 AM to 12.00 PM</b>	<b>12.00 PM to 1.30 PM</b>	<b>1.30 PM to 2:30 PM</b>	<b>2:30 PM to 4.00 PM</b>	<b>4.00 PM to 5:00 PM</b>
<b>06-09-2021 (Monday)</b>	<b>Inauguration</b>	<b>Break</b>	<b>Session 1</b> Speech Intelligibility relationship with Mental Health <b>(KN)</b>	<b>Break</b>	<b>Session 2</b> Speech Intelligibility relationship with Mental Health <b>(KN)</b>	<b>Break</b>
<b>07-09-2021 (Tuesday)</b>	<b>Session 3</b> AI and Deep Learning for Remote Monitoring of Parkinson's patients. <b>(PS)</b>	<b>Break</b>	<b>Session 4</b> Decision Support System for Progression detection in Parkinson's patients using facial expressions. <b>(PS)</b>	<b>Break</b>	<b>Session 5</b> Technological Interventions and Learning for children with Autism Spectrum Disorder. <b>(AS)</b>	<b>Break</b>
<b>08-09-2021 Wednesday)</b>	<b>Session 6</b> Mindfulness Meditation I <b>(MS)</b>	<b>Break</b>	<b>Session 7</b> Applied AI Technologies in Microsoft <b>(AC)</b>	<b>Break</b>	<b>Session 8</b> Mental Health: An AI Perspective. <b>(MJ)</b>	<b>Break</b>
<b>09-09-2021 (Thursday)</b>	<b>Session 9</b> AI in Health Care <b>(DG)</b>	<b>Break</b>	<b>Session 10</b> Deployment of AI in clinical workflows <b>(PR)</b>	<b>Break</b>	<b>Session 11</b> <b>Hands-on</b> Deployment of AI in clinical workflows <b>(PR)</b>	<b>Break</b>
<b>10-09-2021 (Friday)</b>	<b>Session 12</b> AI Solutions and Hopes for Mental well-being . <b>(MJ)</b>	<b>Break</b>	<b>Session 13</b> Mindfulness Meditation II <b>(PH)</b>	<b>Break</b>	<b>Session 14</b> IOT Enabled Mental Health: open issues and challenges <b>(YS)</b>	<b>Test followed by the Valedictory and feedback</b>

## Expert Name and Designation

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