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The Constituent College

SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE, VIJAYAPURA

A REPORT

CME ON ***"MACHINE MINDS IN MEDICINE: REVOLUTIONIZING HEALTHCARE & RESEARCH WITH AI"***

ORGANISED BY R & D CELL IN COLLABORATION WITH DOCKARE,

HEALTH & LIFESCIENCES, BANGALURU.

ON 7TH JUNE, 2023

AT DEPT. OF MEDICAL EDUCATION, BLDE (DU), VIJAYAPURA





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RESEARCH & DEVELOPMENT CELL



CME

Machine Minds in Medicine: Revolutionizing Healthcare & Research with AI




& DOCKARE
HEALTH AND LIFESCIENCES

Powered By




10Am- 1Pm.
Medical Educational Hall, 2nd Floor, Hospital Building.
07/06/2023
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MACHINE MINDS IN MEDICINE: REVOLUTIONIZING HEALTHCARE & RESEARCH WITH AI			
Sl. No	Topic	Time	Speaker
	INAUGURATION	10:15 - 10:30 AM	
1	AI in Protocol Building to Publication	10:30 - 11:00 AM	Dr. Sai Shankar Co-Founder and CEO, Dockare
2	AI in Healthcare	11:00 - 11:20 AM	Dr. Anil Reddy, BLDE(DU)
3	AI tools for the Academic/Medical Research	11:20 - 11:45 AM	Dr. Prasanna Kumara BM BLDE(DU)
	Tea Break	11:45 - 12:00 AM	
4	Ethical Considerations in AI	12:00- 12:20PM	Dr. Rajesh, Head of Clinical Research,Dockare
5	Introduction to Statistical Software	12:20- 12:45 PM	Dr. Rajesh, Head of Clinical Research,Dockare
6	Hands on Application	12:45 - 1:30 PM	Dr. Sai Shankar Co-Founder and CEO, Dockare

Summary report of CME

R & D Cell of the BLDE (DU), conducted CME on ***“MACHINE MINDS IN MEDICINE: REVOLUTIONIZING HEALTHCARE & RESEARCH WITH Artificial Intelligence”*** in collaboration with DOCKARE, HEALTH & LIFESCIENCES, BANGALURU on 7th June, 2023 at Department of Medical Education. The main objective of this CME was artificial intelligence in medicine is the use of machine learning models to search medical data and uncover insights to help improve health outcomes and patient experiences. The program started at 10.00 am welcomed all speakers and delegates by Dr. Chandrika Doddihal, Dy.R & D Cell Director. Dr. M.M.Patil, Director R & D Cell gave the overview of the CME program.

The program was inaugurated by **all the resource persons of the CME followed** by welcome speech. One day program was attended by **more than 69 participants** from various departments PG's.

Dr. Sai Shankar, Founder & CEO of the DOCKARE delivered the session on: “AI in protocol building to publication”. He explained about, Artificial intelligence (AI) advancements allow machines to achieve human-like intelligence. Problem-solving and decision-making are two mental abilities to measure human intelligence. Building a generalized representational model for various inputs and outputs is essential to obtaining such humanlike capabilities. Many scholars tried to articulate different models from different perspectives. However, there is a gap in establishing an overall AI-oriented hierarchical framework. This study proposes a novel model known as the emerged AI protocol that consists of seven abstractive layers capable of providing a meaningful solution for a given problem. In contrast to previous hierarchies, we argue that this unique model is conceptually evident, logically consistent, theoretically compelling, and practically adaptable. We aim to create a generalized model that can be implemented by various machine learning (ML) algorithms for problem-solving and decision-making.

Dr. Anil Reddy, Asst.Professor, BLDE (DU) delivered the session on: “AI in Health Care”, he explained about, the healthcare service system plays a pivotal role in the medical domain that constitutes massive demands of human life. To evolve, healthcare providers in developing countries are using intelligent technologies like artificial intelligence (AI) and machine learning techniques. Regarding AI integration, advancements in healthcare have led research on human-centered healthcare intelligent systems. AI technologies exert influence on the development of intensive care and supervisory activities in hospitals and clinics. These advancements provide prompt, economical, and better-qualified solutions for modern prognosis, prevention, medication, and healthcare breakthroughs. The process involved in medical diagnosis invites various applications of AI to refine the accuracy in prediction, enhanced service delivery, improved disease detection, and more. The AI-assisted processes are modernizations in the research-intensive medical industry. These include exploration of drugs, personalized medicine, clinical diagnosis investigations, robotic-assisted surgery, verified prescriptions, trained pregnancy care for women, radiology, and reviewed patient information analytics. Automation is no longer a standalone word and, in most cases, has been in line with the application of AI in recent years.

This Special Issue aims to invite original research and review articles that apply AI technologies and algorithms to automate and revolutionize traditional healthcare systems, thereby reducing the risk of being exposed to multiple diseases or threats.

Dr. Prasannakumara B.M., Librarian, BLDE(DU) conducted a session on: "AI tools for the Academic /Medical Research" he explained and demonstrated various websites which help to academics and research tools which updated regularly which helps to students for to understand the current scenario and medical researches.

Following is a list of the top 10 AI tools for academic research helpful for researchers

Scholars and Students have devoted countless hours to **academic research** and writing throughout history. Even though researchers now have access to more information and **AI tools** than ever before thanks to technology and the internet, it can be challenging to find the right **AI tools for research**. Scholars and researchers require assistance sorting through and organizing sources due to the abundance of information available today. In addition, scholars and researchers must write informative, engaging, and well-written articles and reports due to the ongoing pressure to publish. Here is the list of **AI tools for academic research**.

1. Consensus:

The agreement is a web index that utilizes **Artificial intelligence** to find answers for issues raised by logical requests quickly. AI is used to scan peer-reviewed research and extract the main conclusions from each one. Contrasted with manual looking, this gives individuals admittance to material from established researchers all the more quickly. The findings are supported by data from peer-reviewed studies rather than skewed advertising, and there are no advertisements at all in them.

2. ChatPDF:

Users can converse with a PDF document through the AI application ChatPDF. Without signing in, users can interact with any PDF they own, such as books, research papers, manuals, articles, and legal documents. To comprehend the content of PDF files and provide pertinent responses, ChatPDF makes use of a next-generation AI model comparable to ChatGPT.

3. Scite:

Scite's Assistant, an AI-powered research tool, lets users work together on essays and research papers, find evidence to back up their claims and find evidence to refute them. Clients might enter straightforward questions to get reactions in light of the total texts of exploration distributions. The application can be used by users to find reliable information, search through millions of research articles, and create grant proposals or essay drafts.

4. Elicit:

Elicit, a machine learning tool, is used by the AI research assistant to help automate research procedures. Without specific keyword matches, it can locate relevant articles and extract important information. Inspire may likewise give different exploration exercises, including conceptualizing, summing up, and text-order, as well as summing up central issues from the report that are pertinent to the client's request.

5. Trink:

Online sentence structure checker and language proof-reader Trink artificial intelligence was made for specialized and scholastic composition. It is made to catch errors that other grammar checkers miss, like issues with subject-verb agreement, syntax, word choices, the use of pronouns and articles, and technical spelling. In addition, it incorporates a professional tone, the use of technical words, conciseness that goes beyond grammar and spelling, and style guides.

6. Scholarcy:

The online summarizing tool Scholarcy is a simple way to quickly examine and evaluate the significance of documents like articles, reports, and book chapters. Any Word or PDF document can be used to create summary flashcards that are displayed in an organized and easy-to-understand manner.

7. Academic Semantics:

The vast majority know about Google Researcher, which uses Google's web search tool ability to list academic distributions. But if you're doing any kind of scientific research, you should try Semantic Scholar. This AI-powered search and discovery tool, made available by publisher partnerships, data suppliers, and web crawls, enables you to keep up with more than 200 million academic publications.

8. Bit.ai:

Utilizing the internet to find information is a blessing. The amount of data that is accessible and the fact that it can be found in a variety of formats, such as blogs, essays, films, info graphics, and images, present two challenges. Finding and organizing all of the data related to your study's many areas might take a lot of effort.

9. SciSpace:

SciSpace is a platform driven by AI that lets people read, understand, and submit scientific articles. Its extensive searchable database contains more than 270 million articles, authors, subjects, journals, and conferences. It also offers a variety of paper template choices, a variety of pricing options, and additional services to speed up the printing process.

10. OpenRead:

OpenRead is an AI-driven interactive platform that enables users to organize, engage with, and analyze a variety of literary forms, including essays, journals, and research materials. The platform has several features, like a Q&A system that responds quickly to questions about articles and the Paper Espresso function, which helps researchers write literature reviews faster by digesting publications.

Dr.Rajesh, Head of the Clinical Research, DOCKARE conducted the session on: “ Ethical considerations in AI & Introduction to statistical software”, he explained, AI applications in healthcare have literally changed the medical field, including imaging and electronic medical records (EMR), laboratory diagnosis, treatment, augmenting the intelligence of the physicians, new drug discovery, providing preventive and precision medicine, biological extensive data analysis, speeding up processes, data storage and access for health organizations. However, this field of science faces various ethical and legal challenges. Despite tremendous strides made in the field of AI in communities, and its role in improving the treatment process, it is not accessible to all societies. In healthcare, current laws are not enough to protect an individual's health data. Clinical data collected by robots can be hacked into and used for malicious purposes that minimize privacy and security. Informed consent is a process of communication between a patient and health care provider, which includes decision capacity and competency, documenting informed consent, and ethical disclosure.

Integrating artificial intelligence (AI) with all areas of health care seems difficult and impossible. Due to uniquely human emotions, human and medical robots might not evolve together in a short time. Physicians and other care providers should seek consultation from or provide consultation to their colleagues, which is not possible in autonomous (robotic) systems. On the other hand, it seems unlikely that patients will accept “machine-human” medical relations instead of “human-human.” Doctors and nurses are expected to provide treatment in an empathetic and compassionate environment, which will significantly affect the healing process of patients. This will not be achieved with robotic physicians and nurses. Patients will lose empathy, kindness,

and appropriate behaviour when dealing with robotic physicians and nurses because these robots do not possess human attributes such as compassion. This is one of the most significant negative aspects of artificial intelligence in medical science. For instance:

- In Obstetrics and Gynaecology, any clinical examination requires a sense of compassion and empathy, which will not be achieved with robotic doctors.
- Children usually experience fear or anxiety as they engage in healthcare settings and meet professionals. Their behavioural manifestations are lack of cooperation, withdrawal, and aggression that could be uncontrollable with the new robotic medicine system.

Workshop ended with the Valedictory Function chaired by Dr.M.M.Patil, Director R & D Cell and words of gratitude for all the speakers with presenting memento, faculties and students, members for participation in the CME. Special mention for **IT department** for technical support and making event possible. The event ended with vote of thanks to all the participants from all departments.

Afternoon session: Departmental Visits for to demonstrate the APP.

Dept. Of Medicine/Pediatrics/Dermatology:

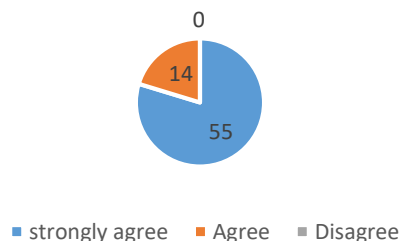
Interaction with Faculties and PG's at the department of Medicine. They have discussed about the DOCKARE applications and its operational systems. They intensively demonstrated and discussed about how the applications will help to the academic and research and its outcome patient care. All the PG's are downloaded the applications. The DOCKARE people will allow for the activations to functions the applications.



Some feedback shared by the participants in their own words:

- *“I deeply appreciate efforts taken to arrange such a CME.it was very knowledgeable as well as hands on! With lot of take away points.as am driving back so not commenting openly. it's one of the best online CME attended so far! I have ordered In-body already for dept.so my interest was more. thanks for insights.”*
- *“All the sessions were wonderful and briefly explained. It provided a lot of knowledge and it is such a wonderful experience to be a part of this workshop thanks.”*

1. Was the CME helpful to you?



2. Which of the following best describes the material/content covered in these sessions?



3. Would you like to undergo for similar or advanced CME/Workshop aspect/subject





On the behalf of whole organizing team, I sincerely thank all the administrators of the University for all the Blessings, support and motivation to successfully conduct the CME.

Reported By,

Dr.Nirmala G.
R & A.

Dr. Manu Patil
9/6/23

DIRECTOR
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ATTENDANCE SHEET

Event: CME Machine Minds in Medicine Revolutionizing .
Health Grp & Research with AI .

Date: 07/06/2023

Venue: Medical Education Hall.

Topic: _____

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