



SRI VENKATESWARA COLLEGE OF ENGINEERING
DEPARTMENT OF INFORMATION TECHNOLOGY

ASSOCIATION OF INFORMATION TECHNOLOGISTS
In Association with the Department of Applied Chemistry

A Technical Talk

On

“Artificial Intelligence: Opportunities in Healthcare”

10.01.2024

A Report

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Submitted to the principal
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5/11/24



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Report

1. Resource Person : Dr. IlanKumaran Kaliamoorthy,
Chief Executive Officer & Senior Consultant,
Liver Anesthesia & Intensive Care,
Rela Hospital, Chennai.
2. Target Audience : Students & Faculty
3. Venue : Biotech Conference Hall
4. Date & Time : 10th January 2024 & 9:00 AM

Objectives

- To improve the accuracy and speed of clinical decision-making.
- To enhance the diagnostic accuracy and early detection of diseases.
- To extract valuable information from unstructured data in electronic health records (EHRs) and medical literature.
- To enable continuous monitoring of patients outside traditional healthcare settings.
- To develop teleoperated robotic systems, allowing surgeons to perform procedures remotely.

On 10th Jan 2024, Dr. IlanKumaran Kaliamoorthy, Chief Executive Officer & Senior Consultant, Liver Anesthesia & Intensive Care, Rela Hospital, Chennai, delivered a talk on “**Artificial Intelligence: Opportunities in Healthcare**”.

Ms. Akshara, Final year student, Department of Information Technology, SVCE, delivered the welcome address.

Dr. V. Vidhya, Professor & Head, Department of Information Technology delivered a short note by welcoming the chief guest and motivated the students by shedding light on the transformative potential of AI in health care. Introduction to the Chief Guest was delivered by Dr. G. Baskar, Associate Professor, Department of Applied Chemistry. He highlighted the guest achievements and contributions to the field of Artificial Intelligence in Healthcare.

The workshop lasted for more than an hour. The resource person started the lecture with the need for AI in health care and its challenges. He first started his presentation by explaining the need of generative AI in this era. He elaborated on the key issues of health care specific to India. The resource person highlighted how AI technologies contribute to expeditious decision-making, a critical factor in the healthcare domain where timely interventions can significantly impact patient outcomes. He provided a comprehensive overview of the technological advancements in storage capacity, elucidating how patient data is now collected from diverse locations. He also explained how the chatGPT and other AI tools contribute to public health by providing initial insights and guidance.

Then, he explained in detail about the clinical and administrative applications of AI in health care. He also highlighted the latest AI applications in health care like AI in wearables, nutrition, treatment of mental health, AI in emergency room and surgery, etc. The resource person detailed how AI is making significant contributions to improve efficiency and accuracy in emergency responses and surgical procedures. He also explained the importance of early detection and automated diagnosis of diseases using AI algorithms for fast reporting using image datasets. The resource person provided a live demonstration of a recent robotic surgery that took place at Rela Hospital. He described how AI-driven robotic systems are revolutionizing surgical procedures, enhancing precision, and potentially reducing recovery times.

He elucidated diagnostic pathology and the depiction of AI and ML approaches used by pathologists to analyze the images. He highlighted how AI contributes to advancements in healthcare, leading to more efficient diagnostic processes, drug discovery, and personalized treatment plans. This can potentially improve health outcomes, reduce the need for extensive medical procedures, and lower healthcare-related manpower requirements.

He raised some survey questions among students and faculty on how much they believe in AI. Finally, he concluded his presentation by specifying how AI has the potential to drive efficiencies and reduce manpower in certain areas, it also brings ethical considerations and challenges, including job displacement, the need for reskilling, and concerns about algorithmic bias. Therefore, responsible and thoughtful implementation of AI technologies is crucial to ensure a positive impact on both the workforce and the environment. Additionally, the transformative effects of AI are complex and multifaceted, and its influence on society will depend on various factors, including policies, education, and the adaptability of individuals and organizations.

The participants gained insights into the transformative potential of AI in these areas, realizing how technology is not only shaping diagnostic and treatment landscapes but also extending its reach into holistic healthcare practices. After the questions and feedback session, the program came to an end by delivering a vote of thanks. Ms. Keerthana, III year IT student delivered the vote of thanks and extended her gratitude to Dr. Ilankumaran, CEO for his excellent and informative talk on AI in health care. She also extended her special thanks to Principal Dr. S. Ganesh Vaidyanathan, Dr. V. Vidhya, Professor & Head, INT, Dr. S. Stanly, Professor & Head, ACH, for their continuous support and motivation. She also thanked Dr. G. Baskar, ASP/ACH, Dr. N. Devi, ASP/INT and Dr. D. Jayanthi, ASP/INT and the AIT coordinators Dr. V. M. Sivagami, Prof/INT and Dr. A. Thiyagarajan, AP/INT for successfully organizing the guest lecture.

Outcomes

1. Interpret medical images using AI, such as X-rays, MRIs, and CT scans, providing valuable insights for timely diagnosis.
2. Enhance treatment efficacy and patient outcomes by Personalized Treatment Plans.
3. Enable the development of predictive models for disease prevention by identifying patterns and risk factors.
4. Enhance patient engagement, answer queries, and facilitate appointment scheduling, improving overall healthcare service delivery.
5. Contribute to the growth of telehealth, providing virtual consultations and increasing access to healthcare services.

Coordinators

Dr. V. Vidhya, Prof & Head/INT

Dr. G. Baskar, ASP/ACH

Dr. N. Devi, ASP/INT

Dr. D. Jayanthi, ASP/INT

& AIT Coordinators

Dr.V.M.Sivagami, Prof/INT

Mr. A. Thiyagarajan, AP/INT

HOD/INT

Dr.V.Vidhya

MOMENTS – FREEZED



Prayer Song



Prayer Song



Welcome Address by Ms.Akshara, IV year IT



A Short note by HOD/INT



Introduction to Chief Guest by Dr. G. Baskar, ASP/ACH



Presentation by Chief Guest Dr. Ilankumaran, CEO



Presentation by Chief Guest Dr. Ilankumaran, CEO



History of AI in medicine



Goals



AI tools



Major Challenges



Patient's Data Collection



Clinical and Administrative Applications



Image diagnosis using AI



Fast reporting and diagnosis using AI



Latest Applications in Health Care using AI



Robotic Surgery at Rela hospital



AI driving the world



Conclusion



Conclusion



Memento to Chief Guest by HOD/INT



Vote of Thanks

INTERACTION WITH STUDENTS – PROJECT PRESENTATION

Students had a valuable and enriching experience after the expert guest lecture. Interacting with the CEO of Rela Hospital provided them with unique insights into the healthcare industry, particularly regarding the role of AI in the medical field. Students presented their healthcare-related projects and showcased their knowledge and skills, as well as received feedback from the expert.

The following list of students presented show cased their health care related project works to the expert.

1. Mr. S. Roshan (212720801071) IV Year IT A

Project title: A disease detection system using machine learning and deep learning techniques.



2. **Mr. S. Nithish** (2127210801071), **Ms. S. Swetha** (2127210801107), and **Mr. G. Vijayaraghavan** (2127210801309), III Year IT B

Project title: Robotic Surgery and its Equipment



3. **Ms. M. Keethana** (2127210801049), **Mr. VS Kaushik** (2127210801048) and **Mr. M. Sasikiran**(2127210801306)

Project title: A Diabetes Prediction App



4. **Mr. S. Pragatheeswar** (2127210801078) and **Ms. Oviya Srinivasan** (2127210801073)

Project title: AI Visionary for Blind



5. **Ms. B. Preetha** (2127210801080), **Ms. Raja Rajeswari** (2127210801085) and **Ms. Oviya Srinivasan** (2127210801073)

Project title: Automatic Drug Vending Machine



6. **Mr. M. Sri Harihara Sudhan** (2127210801099), **Mr. U. Sujith** (2127210801102) and **Mr. V. Valliyappa** (2127210801097)

Project title: CODE-RED – A Blood Donation Web Application



7. **Ms. Akshara U J** (2127200801009) IV year IT A

Project title: Relix – Gamefied Platform to tackle and survive in real life accidents





Group Photo – Organizing Team

CHIEF GUEST PROFILE

Dr. IlanKumaran Kaliamoorthy



**Chief Executive Officer & Senior Consultant, Liver Anesthesia & Intensive Care,
Rela Hospital, Chennai.**

Brief Profile

- Alumni of Madras Medical College
- 20 years of experience in Anaesthesia and Intensive Care
- UK- 6 years of experience. Also obtained FRCA from the Royal College of Anaesthetists, London
- India- 13 years in the field of liver transplantation with Prof Mohamed Rela
- Managed more than 2500 liver transplant patients in the perioperative period and played a major role in setting up 25 liver transplant centers in India and abroad until now.
- Felicitated by The Governor of Tamil Nadu, for the contribution towards Tamil Nadu Organ Donation Programme in 2012
- CEO of Rela Institute, a JCI accredited 450 bedded facility
- Business administration course- PGPMAX from the prestigious Indian School of Business
- Published 60 articles/papers in International peer-reviews journals and books
- Invited speaker for more than 100 clinical and leadership conferences.

Educational Qualifications

- MBBS 1999, Coimbatore Medical college
- DA 2001, Madras Medical College
- FRCA 2008, Royal College of Anesthetists, London, UK

Honors Awards

- The Governor of Tamil Nadu had felicitated him for his contribution towards “Tamil Nadu Organ Donation Programme” in August 2012.
- The prestigious TNJHA memorial- KP. Sansoria award by the Indian Society of Anaesthesiologists was presented to him for his work on ‘Continuous caudal block with tunneling of Epidural catheter’, which is an innovative technique in the field of Regional Anaesthesia in Paediatrics in 2003

Research Publication

Book Chapters & Journal Publications

- Ilankumaran Kaliamoorthy: Anaesthesia in Paediatric Liver Transplantation. Pediatric Liver Intensive Care, 01/2019: pages 91-93; , ISBN: 978-981-13-1303-5, DOI:10.1007/978-981-13-1304-2_15
- Ilankumaran Kaliamoorthy, Akila Rajakumar: Anaesthesia and Critical care for liver resection. Surgery of the liver, first edited by Mohamed Rela, Samiran Nandy, 01/2014: chapter Anaesthesia and Critical care for liver resection: pages 34-45; Elsevier., ISBN: 978-81-312-4041-0
- S. Arul Kumar, A. Rammohan, M.S. Reddy, G. Narasimhan, R. Rajalingam, I. Kaliamoorthy, P. Shanmugam, M. Rela: 6. Auxiliary Partial Orthotopic Liver Transplantation for Selected Non Cirrhotic Metabolic Liver Disease. Journal of Clinical and Experimental Hepatology 05/2019; 9(3):423., DOI:10.1016/j.jceh.2019.04.009
- Sachan Deepti, Saha Suryatapa, Kaliamoorthy Ilankumaran, Rela Mohamed: Hemolytic events during therapeutic plasma exchange: Root cause analysis. Asian Journal of Transfusion Science 01/2019; 13(1):76., DOI:10.4103/ajts.AJTS_40_18
- Ramkiran Cherukuru, Mettu Srinivas Reddy, Naresh P Shanmugam, Rajesh Rajalingam, Venugopal Kota, Vasanthakumar Gunasekaran, Gomathy Narasimhan, Ilankumaran Kaliamoorthy, Mohamed Rela: Feasibility and Safety of Split Liver Transplantation in the Indian Context. Liver Transplantation 12/2018; 25(3)., DOI:10.1002/lt.25405
- Ashwin Rammohan, Mettu Srinivas Reddy, Gomathy Narasimhan, Rajesh Rajalingam, Ilankumaran Kaliamoorthy, Naresh Shanmugam, Mohamed Rela: Auxiliary Partial Orthotopic Liver Transplantation for Selected Non Cirrhotic Metabolic Liver Disease: No Longer Stepping Through the Looking Glass?. Liver Transplantation 10/2018;, DOI:10.1002/lt.25352.



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Pennalur, Sriperumbudur Taluk - 602117

ASSOCIATION OF INFORMATION TECHNOLOGISTS
In Association with Department of Applied Chemistry
&
DEPARTMENT OF INFORMATION TECHNOLOGY

Solicit your esteemed presence for the

Technical Talk

On

“Artificial Intelligence: Opportunities in Healthcare”

by

Dr. IlanKumaranKaliamoorthy
Chief Executive Officer &
Senior Consultant
Liver Anesthesia & Intensive Care
Rela Hospital, Chennai

DATE : 10.01.2024
TIME : 9.00 AM
VENUE : Biotech Conference Hall



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AGENDA

- Prayer Song
- Welcome address
- Shortnote by HOD
- Introduction to Chief Guest
- Special talk by Chief Guest
- Questionnaire and Feedback
- Vote of Thanks

Event Coordinators

Dr. V. Vidhya, HoD/IT
Dr. G. Baskar, ASP/AC
Dr. N. Devi, ASP/IT
Dr. D. Jayanthi, ASP/IT

AIT Coordinators

Dr. V. M. Sivagami, Prof/IT
Mr. A. Thiyagarajan, AP/IT



SRI VENKATESWARA COLLEGE OF ENGINEERING
FEEDBACK FROM THE SPEAKER - GUEST LECTURE

DEPARTMENT : INFORMATION TECHNOLOGY

Name of the Speaker	: Dr. Ilankumaran Kaliamoorthy
Designation	: Chief Executive officer & Senior consultant
Institution/University/Organisation	: Rela Hospital, Chennai
Mobile / E-mail	:
Title of the Lecture	: Artificial Intelligence: Opportunities in Health care.
Date	: 10/01/2024
Time	: 11.00 am
Venue	: BioTech Conference Hall
Comments by the Speaker	: Thanks for the opportunity. Good Venue Brilliant students Impressed with their presentation. Looking forward to guide them in the future.
Suggestions for improvement	:
Signature of the Speaker	:

Signature of Coordinator

Signature of HOD



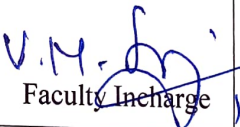
V.M. [Signature]
10/1/24

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SRI VENKATESWARA COLLEGE OF ENGINEERING
 FEEDBACK - INPLANT TRAINING / SHORT TERM COURSE


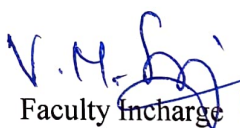
Name of the Student	KAUSHICK VB
Branch/Semester/Section/Roll No.	INT/VI/A/48
Industry/ Institution Visited	SVCE
Duration of Training/ Course with date	10/1/24
Plants visited during training	—
Whether the training/Course was useful? In what way? Give reasons.	The Session was extremely Useful and was an eyeopening session in the field of AI
Any other suggestions	- Nil -
	 Signature
Report and Copy of Certificate submitted.	
 HOD	 Faculty Incharge 10/1/24

The person who has attended the course should prepare this in triplicate and submit copies to:
A2, A3 and Dept.



SRI VENKATESWARA COLLEGE OF ENGINEERING

FEEDBACK - INPLANT TRAINING / SHORT TERM COURSE

Name of the Student	SAI NITHISH-S
Branch/Semester/Section/Roll No.	INT 06 'B' 92
Industry/ Institution Visited	SVCE
Duration of Training/ Course with date	Seminar 10.01.2024
Plants visited during training	—
Whether the training/Course was useful? In what way? Give reasons. Yes, the session was very useful, we got lots of insights in the domain AI & its impact on healthcare	
Any other suggestions Nil	
Report and Copy of Certificate submitted.	
 HOD	 Faculty Incharge 10/1/24

The person who has attended the course should prepare this in triplicate and submit copies to:
A2, A3 and Dept.



SRI VENKATESWARA COLLEGE OF ENGINEERING

FEEDBACK - INPLANT TRAINING / SHORT TERM COURSE

Name of the Student	S Raja Rajesvari
Branch/Semester/Section/Roll No.	IT /VII B /85
Industry/ Institution Visited	SVCE
Duration of Training/ Course with date	10/01/2024
Plants visited during training	—
Whether the training/Course was useful? In what way? Give reasons.	The session was an eye opener for students in technology field to participate and take part in healthcare domain
Any other suggestions	Nil
Report and Copy of Certificate submitted.	

HOD

Signature



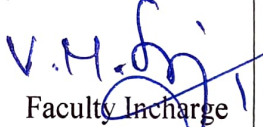
N.M. Srinivasulu Reddy
Faculty Incharge 10/1/24

The person who has attended the course should prepare this in triplicate and submit copies to:
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SRI VENKATESWARA COLLEGE OF ENGINEERING

FEEDBACK - INPLANT TRAINING / SHORT TERM COURSE


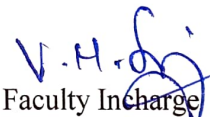
Name of the Student	N.K. Nithish Kumar
Branch/Semester/Section/Roll No.	BTECH/IT/VI/A/2127210801304
Industry/ Institution Visited	-
Duration of Training/ Course with date	10/01/2024
Plants visited during training	SVCE
Whether the training/Course was useful? In what way? Give reasons.	Yes, It was a very good and useful session.
Any other suggestions	No  Signature
Report and Copy of Certificate submitted.	 HOD  Faculty Incharge 10/1/24

The person who has attended the course should prepare this in triplicate and submit copies to: **A2, A3 and Dept.**



SRI VENKATESWARA COLLEGE OF ENGINEERING

FEEDBACK - INPLANT TRAINING / SHORT TERM COURSE

Name of the Student	U.J. Akshara
Branch/Semester/Section/Roll No.	2127200801009 - INT-A
Industry/ Institution Visited	-
Duration of Training/ Course with date	10/01/2024
Plants visited during training	-
Whether the training/Course was useful? In what way? Give reasons.	The session provided us great and valuable insights about the ever evolving field of AI.
Any other suggestions	The session was very informative
Report and Copy of Certificate submitted.	
 HOD	 Faculty Incharge 10/1/24

The person who has attended the course should prepare this in triplicate and submit copies to:
A2, A3 and Dept.