Parshvanath Charitable Trust's
A. P. SHAH INSTITUTE OF TECHNOLOGY
(Approved by AICTE New Delhi & Govt. of Maharashtra, Affiliated to University of Mumbai)
(Religious Jain Minority)

Case Study Presentation Scheduled from 20th August, 2024 onwards

Subject: AIML in Healthcare **Semester: VII (Honour/Minor)** **Department: IT and DS**

Note: The following is the allotment of topics for case study presentation. Students need to present the topic based on the points mentioned below:

- *Background*
- *Implementation*
- *Results*
- *Impact*

The sequence to be followed for the presentation is as mentioned below:

1. AI-Powered Diagnostics in Radiology – Tanaya Patil
2. Personalized Medicine with AI - Adarsh
3. AI-Powered Electronic Health Records (EHR) Optimization - Shivani
4. AI-Assisted Surgical Robotics - Amogh
5. AI-Driven Predictive Analytics for Patient Outcomes - Siddhi
6. AI in Epidemic Outbreak Prediction - Pratik
7. AI for Mental Health Monitoring - Vinayak
8. Robot-Assisted Surgery for Paediatrics Patients - Sanchit
9. AI in Sleep Study and Therapy - Swapnil
10. AI for Chronic Disease Management - Manas

Oncology Use Cases

11. Use Case #1: Risk Assessment Models for Cancer Diagnosis - Prakruti
12. Use Case #2: Optimizing Chemotherapy Treatment Plans - Payal
13. Use Case #3: Monitoring Oncology Treatment Response – Tanaya Kulkarni

Cardiology Use Cases

14. Use Case #4: Congestive Heart Failure Readmission Risk Prediction - Rohan
15. Use Case #5: ECG Analysis Algorithms to Detect Arrhythmias - Riya
16. Use Case #6: CT Image Processing to Identify Plaque Buildup - Rutuja

Radiology Use Cases

17. Use Case #7: Flagging Critical Imaging Findings - Karan
18. Use Case #8: Quantifying Disease Progression through Imaging – Harsh Joshi

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19. Use Case #9: Automating Follow-up Recommendations from Radiology Reports - Shweta

Additional AI Applications

20. Use Case #10: Sepsis Early Warning and Risk Scoring Systems - Sumit
21. Use Case #11: Optimizing Hospital Nursing Staff Models - Arya
22. Use Case #12: Automating Patient-Reported Outcome Collection – Meet

Research Work based on AI-ML in Healthcare

23. Computer vision to enhance healthcare domain: An overview of features, implementation, and opportunities – Tanvi
24. Enhancing AI interpretation and decision-making: Integrating cognitive computational models with deep learning for advanced uncertain reasoning systems – Vedant
25. Hygieia: AI/ML pipeline integrating healthcare and genomics data to investigate genes associated with targeted disorders and predict disease – Sonal
26. Schematized study for tackling COVID-19 with Machine Learning (ML), Artificial Intelligence (AI), and Internet of Things (IoT) – Yuvraj
27. Advances in AI-assisted biochip technology for biomedicine – Yatish
28. Facilitating public involvement in research about healthcare AI: A scoping review of empirical methods - Soham
29. Fair and equitable AI in biomedical research and healthcare: Social science perspectives - Rohit
30. Navigating uncertainties of introducing artificial intelligence (AI) in healthcare: The role of a Norwegian network of professionals - Ronit
31. Managing healthcare supply chain through artificial intelligence (AI): A study of critical success factors - Praniv
32. Optimizing human-centered AI for healthcare in the Global South - Jash
33. Assessing the communication gap between AI models and healthcare professionals: Explainability, utility and trust in AI-driven clinical decision-making - Ashwini
34. A review of Explainable Artificial Intelligence in healthcare - Anshika
35. Computer vision based healthcare system for identification of diabetes & its types using AI - Avisha
36. IN24 AI SUPPORTING PATIENT-CENTRIC HEALTHCARE LEARNING - Bharat
37. Defining change: Exploring expert views about the regulatory challenges in adaptive artificial intelligence for healthcare - Dhruv

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38. How does artificial intelligence impact digital healthcare initiatives? A review of AI applications in dental healthcare - Harsh Shelke
39. Exploring the risks of automation bias in healthcare artificial intelligence applications: A Bowtie analysis - Meghraj
40. Semantic interoperability for an AI-based applications platform for smart hospitals using HL7 FHIR - Varad
41. Artificial intelligence in healthcare delivery: Prospects and pitfalls - Tushar