



DEPARTMENT OF APEX INSTITUTE OF TECHNOLOGY

PROJECT PROPOSAL

1. Project Title: - Developing a Comprehensive Patient Care System in the Health Sector

2. Project Scope: -

- Aim: Design, develop, and implement a Comprehensive Patient Care System in the Health Sector leveraging advanced technologies to enhance patient care, improve healthcare processes, and increase operational efficiency.
- Adoption of EHR Systems: Over 90% of hospitals had adopted electronic health record (EHR) systems as of 2020, indicating the widespread adoption of digital health solutions in the healthcare industry¹.
- Rise of Mobile Health Applications: The popularity of mobile health applications is increasing, with over 318,000 health apps available on major app stores in 2019².
- Growing Demand for Patient-Centric Approach: There is a growing demand for healthcare systems that prioritize a patient-centric approach, empowering patients and delivering personalized care.
- Need for Patient Engagement and Remote Monitoring Tools: Platforms enabling patients to actively engage in their healthcare journey and providing tools for remote monitoring and self-management are needed to address existing gaps.
- Challenges in Achieving Interoperability: Many healthcare systems face challenges in achieving seamless interoperability and efficient data sharing among different providers and systems.
- Need for Comprehensive Telemedicine Infrastructure: Telemedicine has gained popularity, but there is a need for a comprehensive telemedicine infrastructure that incorporates standardized protocols, secure communication channels, and interoperability with other healthcare systems.
- Project Goal: Develop a patient-centric, transparent, and efficient system that promotes standardization and collaboration among healthcare providers, contributing to the ongoing evolution of the healthcare landscape and positively impacting patient care and well-being.

● References:

S.No	Name	References
1	Office of the National Coordinator for Health Information Technology (2020). Adoption of Electronic Health Record Systems among U.S. Non-Federal Acute Care Hospitals: 2008-2020	https://www.healthit.gov/sites/default/files/page/2021-03/AH-2020-Table1.png
2	Research2Guidance. (2019). mHealth Economics 2019 – Current Status and Trends of the Global mHealth App Market	https://research2guidance.com/2019-global-mhealth-market-report-key-takeaways/

3. Requirements: -

➤ Hardware. Requirements

1. Servers Storage
2. Workstations
3. Mobile and Storage Devices

➤ Software Requirements

1. Electronic Health Record (HER) System
2. Clinical Decision Support System (CDSS)
3. Health Information Exchange (HIE) Platform
4. Analytics and Reporting Tools

4. Research Gaps:

- According to a report by the Office of the National Coordinator for Health Information Technology (ONC) in the United States, as of 2020, over 90% of hospitals had adopted electronic health record (EHR) systems and even the use of mobile health applications is on the rise.
- As of 2019, there were over 318,000 health apps available on major app stores, with the number of mHealth app downloads expected to reach 3.7 billion globally by 2022.
- But still, there are many gaps that exist in the existing systems. There is a growing need for healthcare systems that prioritize a patient-centric approach, enhancing patient engagement, empowerment, and personalized care.
- Platforms that empower patients to actively participate in their healthcare journey and provide tools for remote monitoring and self-management could fill this gap.
- Many healthcare systems still face challenges in achieving seamless interoperability and efficient data sharing between different healthcare providers and systems.
- Solutions that facilitate secure and standardized data exchange across diverse platforms and institutions are in demand. While telemedicine has gained popularity,

there is a need for comprehensive telemedicine infrastructure that includes standardized protocols, secure communication channels, and interoperability with other healthcare systems.

5. Solution to Research Gaps:

- This project aim sat eliminating all of the above-mentioned gaps in the existing systems and create a system which is close to patients and the healthcare providers at the same time.
- A platform which can standardize the data exchange between various healthcare providers and make the whole system transparent and efficient.
- Through this project we seek to contribute to the ongoing evolution of the healthcare landscape and make this world a better a place to live in.
- Patient-centric platforms: Develop platforms that allow patients to access their medical records, tracktheir health data, manage medications, and communicate with healthcare providers securely.
- Interoperability solutions: Develop standardized data formats and APIs to facilitate seamless dataexchange between different EHR systems and platforms.
- Telemedicine infrastructure: Establish standardized protocols for telemedicine consultations, including guidelines for patient assessment, diagnosis, and treatment.

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