ABSTRACT

In the evolving landscape of digital healthcare, efficient management of personal medical data and access to reliable health resources are increasingly important. This project introduces a comprehensive digital health platform designed to revolutionize personal health management by integrating secure medical data storage, an intelligent chatbot, and an AI-powered diagnostic tool. Users can securely store and manage their medical records, including health histories, prescriptions, lab results, and imaging reports, with the platform ensuring data privacy through advanced encryption techniques and compliance with health regulations like HIPAA. The interactive chatbot, leveraging natural language processing (NLP), provides reliable health information, addressing medical queries, symptoms, treatments, medication side effects, and general health advice, thus serving as a convenient first point of contact for medical concerns. Additionally, the AI diagnostic tool analyzes uploaded medical scans and X-rays, utilizing sophisticated machine learning algorithms to detect abnormalities and offer preliminary diagnostic insights, encouraging timely consultation with healthcare professionals and potentially leading to earlier detection and treatment of diseases.

Initial trials demonstrate significant enhancements in user convenience and confidence in managing health data and accessing medical advice. By addressing common challenges such as fragmented health records, difficulties in accessing reliable medical information, and delays in recognizing medical issues, the platform empowers users with greater control over their health, promoting proactive healthcare management and improved health outcomes. Future developments will focus on expanding the diagnostic capabilities of the AI tool, enhancing the chatbot's knowledge base, and refining the platform's usability based on user feedback, aiming to set a new standard in digital health solutions and fostering a more informed and engaged patient population.

Technologies – Python, Streamlit, Chainlit, Google teachable machine, Gemini API, Groq API, Flask