Project Pitch: Saving Lives through Real-Time Hospital Crowdedness Analysis and Recommendations

Overview:

Our project leverages data visualization and real-time WiFi data to address a critical issue in healthcare: hospital overcrowding. Using public WiFi hotspots, such as those available at hospitals, we can estimate how many people are currently inside based on the number of connected access points (devices like iPhones, Macs, etc.). This information, combined with crucial hospital data like bed availability, staff count, and proximity, allows us to create a recommender system that directs users to the most suitable hospital based on real-time conditions.

Key Features:

1. Real-Time Crowdedness Analysis: By analyzing the number of devices connected to public WiFi hotspots in hospitals, we can estimate how crowded each hospital is. This data is critical for helping users avoid overcrowded hospitals where long wait times might delay critical care.
2. Recommender System: Our system recommends the best hospital to a user by factoring in their location, nearby hospitals, and how crowded each facility is. We use a formula that incorporates patient load, bed availability, and staff-to-patient ratios to ensure the recommended hospital can provide prompt care.
3. Data-Driven Decision Making: The system's decisions are grounded in real-time data, helping patients make more informed choices and ultimately reducing wait times during emergencies.

How Our Project Saves Lives:

Every second counts during medical emergencies. Overcrowded hospitals can lead to critical delays in treatment, which may result in life-threatening complications or even fatalities. Our platform helps people avoid long waits and directs them to the most efficient hospital based on current conditions. By integrating location data and hospital crowd metrics, we ensure patients receive care faster when they need it the most.

For example, a patient suffering a heart attack may face delays if they go to an overcrowded hospital. Our system, however, can direct them to a nearby hospital with available beds and a lower patient load, increasing the chances of survival.

Why WiFi Data is Key to Our Project:

WiFi data is the backbone of our system. By tapping into the number of devices connected to public WiFi hotspots in hospitals, we gain valuable insights into how crowded a hospital is without requiring any direct access to sensitive hospital systems. This non-invasive data source allows us to dynamically estimate crowd levels at different hospitals and factor that into the recommendation formula.

The accuracy of our crowd estimation is critical for providing real-time recommendations. This WiFi-based analysis enables us to offer a unique, tech-driven approach to hospital management and emergency care that can save millions of lives by cutting down wait times and improving patient outcomes.

Conclusion:

Our project represents a new frontier in healthcare: the use of public WiFi data for life-saving recommendations. By helping users avoid overcrowded hospitals and reducing delays in care, our system could prevent countless medical emergencies from becoming life-threatening. With its ability to deliver fast, data-backed insights, our platform is poised to revolutionize how patients interact with healthcare systems and dramatically improve outcomes