

AI-Enhanced Healthcare Diagnostics and Management System inspired by ZK Medical Billing Platform

ANISTAR



Team Members

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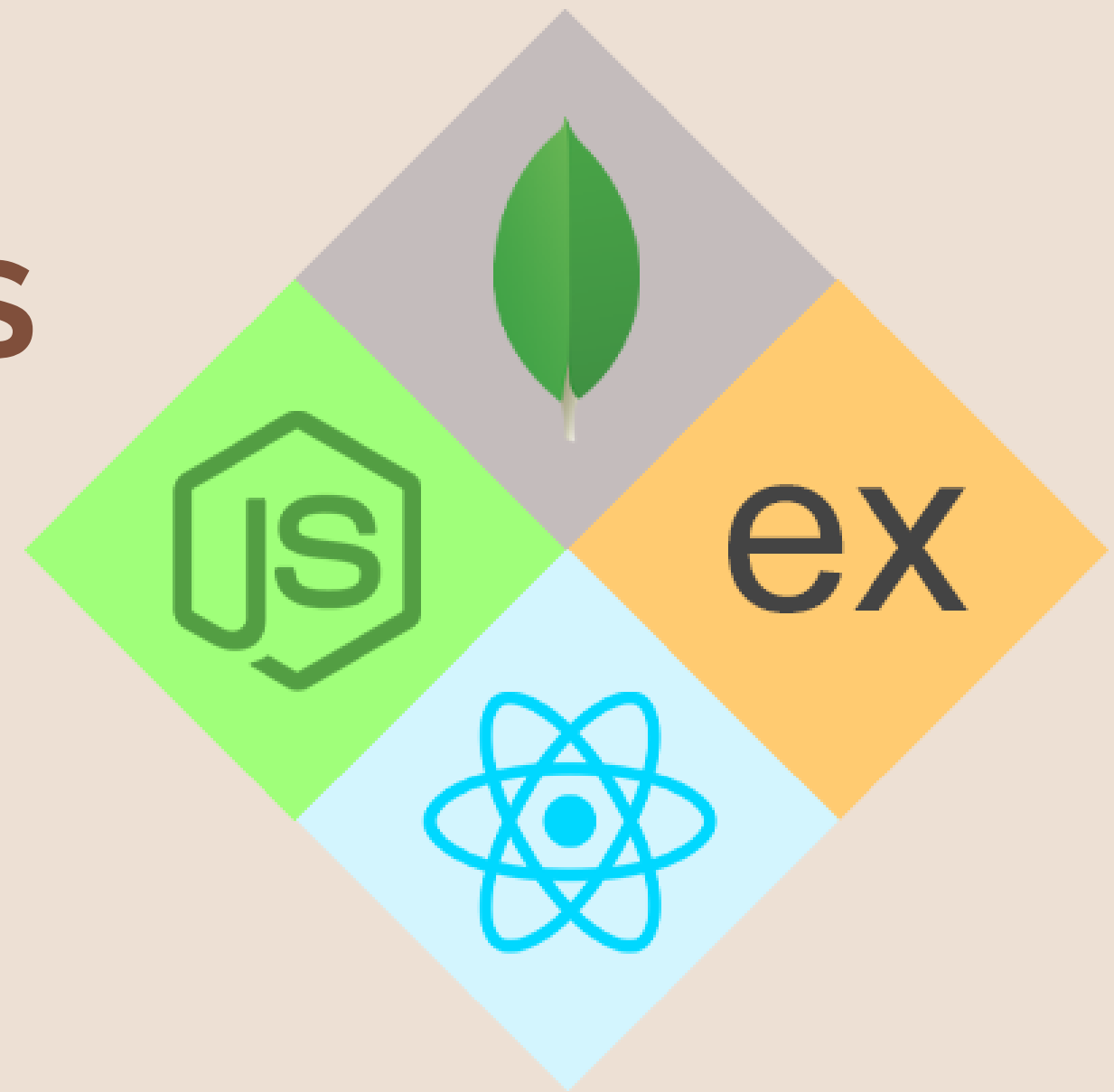
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Tech Stack

- Ollama
- React
- Tailwind CSS
- Node.js
- Express.js
- MongoDB



Proposed Solution

- User interface

Patient portal

sign-up process email id, name, password.

Once logged in patient can view their personal health data, medical history.

Line graphs are implemented which enables patients to visualize their past vitals history.

Staff portal

Once staffed logged in staff members can view & manage medical records for every patient like vitals.

Staff members can view AI generated diagnostic results.



Proposed Solution

- AI/ML

Used an open source LLM

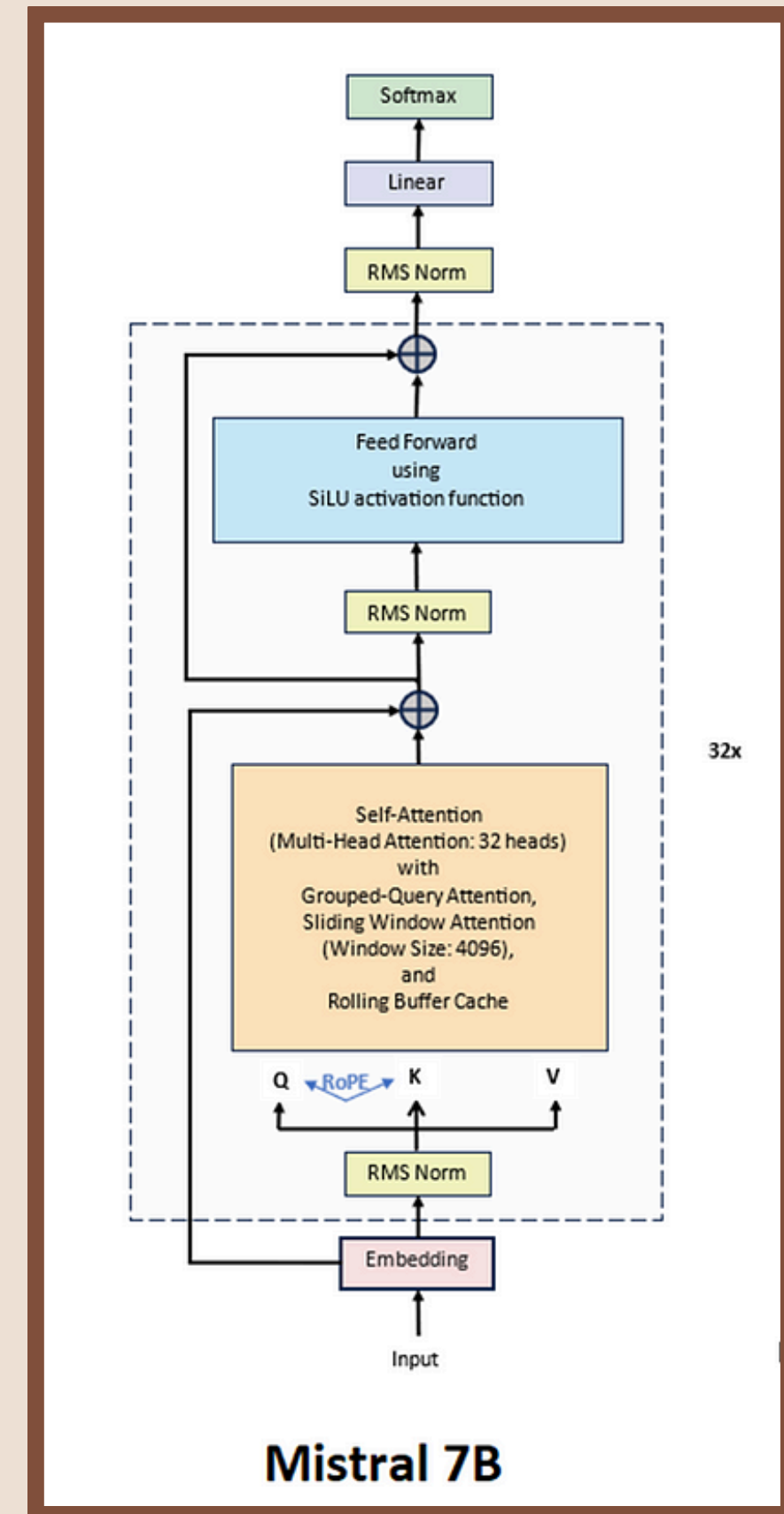
Mistral-7B-v0.1. with a custom system prompt.

The model analyzes patient vitals and generates comprehensive reports detailing potential diseases, anomalies, and recommended medications.

Mistral takes patient vitals as input data. These vitals include metrics such as:

- Blood Pressure
- Heart Rate
- Cholestrol
- Symptoms

It examines patterns, deviations, and correlations within the vitals data.



Proposed Solution

- **Backend**

Database

The database securely stores patient information and their vitals history, facilitating efficient data management and retrieval. It maintains records of vital signs over time, each with a timestamp, allowing for tracking changes and identifying trends.

Accessibility

Staff members can access and manage all patient vitals, including historical data, to support accurate diagnostics and treatment planning. Patients can view their own vitals and historical data to monitor their health and track changes over time.

Visualization

Line Graphs: Used to display trends in vital signs over time, allowing users to observe changes and patterns.

Business Model

Subscription based model

- Monthly/ annual subscription
- Both monthly and annual subscription options to accommodate different user preferences and financial planning.
- Provide discounts for annual subscriptions to incentivize long-term commitments and improve customer retention.

Free trial

- Allow potential users to experience the system's features through a limited time free trial. This helps attract new users and demonstrate the value of the premium features.

USP

Advanced AI-driven Diagnostics

- Cutting-Edge Technology: Leveraging a fine-tuned Large Language Model (LLM) specifically designed for medical queries, our system offers unparalleled diagnostic accuracy and personalized treatment recommendations.
- Real-Time Analysis: Provides immediate insights into potential diseases and remedies based on real-time patient vitals, enhancing decision-making and treatment efficacy.

User Friendly Visualization

- Interactive Graphs and Charts: Provides intuitive visualizations of patient vitals and health trends, making complex data easily understandable and actionable for both patients and healthcare providers.

USP

Comprehensive Health Management

- Holistic Patient View: Integrates detailed patient data, including historical vitals and personal health information, to offer a complete picture of patient health over time.

Seamless Integration & Accessibility

- Two Portals: Offers dedicated portals for both patients and healthcare staff, each tailored to their specific needs and access levels.
- Secure and Controlled Access: Ensures patient data privacy and security with controlled access for staff and patients, including a hardcoded staff login for secure management.