

Medico: Cloud-based Doctor-Patient Portal with AI Chat-Bot

Suyash Shinde¹, Ajit Sinde², Rutuja Bhalerao³ and Dipali Chhatrikar⁴

¹⁻⁴Jspm Rajarshi Shahu College of Engineering, Pune/Electronics and Telecommunication, Pune, India
Email: suyashshinde606@gmail.com, ajitshinde0606, rutumb2003, engg.dipalic77}@gmail.com

Abstract—Healthcare is evolving, and it's all about making things easier for everyone – patients and doctors alike. That's exactly why we created Medico, a web-based app that brings healthcare into the digital age. Medico is indeed meant to be those visions for bringing healthcare into the 21st century via a web-based application. With Medico, the plan is set on booking appointments with doctors, consulting through Zoom, and prescription deliveries straight to your mobile through WhatsApp, thanks to Ultrams. We have also partnered with Razorpay to ensure that payment facilitation becomes that much easier and credibly safe while Cloudinary takes care of keeping all your documents and media safe and sound. Town Hall is and would be multilingual through Weglot so that everybody, wherever they are, can use Medico. Built upon some seriously heavy machinery, such as the MERN stack to deliver speed and seamless accessibility. They're either taking a video call on Zoom, getting a WhatsApp prescription, doing a payment transaction, or inputting documents; all running without a hitch. Empowering people to make healthcare simpler, faster, and more accessible, is possible now in Medico at the palm of your hand.

Index Terms—Online appointment scheduling, telemedicine and cloud-based healthcare, video consults, the prescription goes online delivery, payment integration, chatbot, multilingual web interface, MERN-stack, API integration like Zoom, Ultrams, Razorpay, Cloudinary, and Weglot.

I. INTRODUCTION

This change applies to henceforth technology advances, nowadays in healthcare as well. Digital Solutions were the long-awaited solutions to the old-age dilemmas of access, waits, and communication between patients and doctors. The Medico comes in due to this; it is a cloud-based service where the doctor meets the patient. Medico makes health care easy by providing services required by patients and their physicians. It allows you to make an appointment, conduct a Zoom remote consultation, or receive a prescription via WhatsApp fanned by Ultrams. Razorpay takes care of making payments secure and smooth. Thanks to Weglot, which enables the platform to be multilingual, you're also covered regardless of the spoken language. All your documents and media will be stored safely with Cloudinary, so you never have to worry about losing important information. MERN stack has been used to build Medico (MongoDB, Express.js, React.js, Node.js), which means the system is fast, reliable, and scalable. By subscribing to, or integrating, tools such as Zoom, Ultrams, Razorpay, Cloudinary, and Weglot, a seamless and well-connected user experience was created-an experience in which everything works together.

Access, efficiency, and patient-centeredness are the ceilings for Medico- such a well-made platform: an open accessible, and easy-to-use interface that travels on to solving real-life healthcare issues. Smith would indeed change the mold of how people interact with the healthcare process and move everything toward simpler, faster, and more inclusive experiences for all.

II. RELATED WORK

Have you heard how technology just changes around? Well, so does healthcare. And welcome to Medico, which makes it easy for you. We all know how irritating it can be to sit around waiting for appointments, to try to get through the barriers of difficult communication or to get access to healthcare. Medico solves it all through a platform providing a connection directly between doctors and patients. Book an appointment with Medico, have a Zoom Consultation, and Receive your prescription via WhatsApp delivery leaving home, Payments Simple and Secure through Razorpay and be. In today's epoch, technology influences how we approach healthcare; this has changed a lot, and Medico is already there to facilitate this new way of seeking and receiving healthcare support. We all end up being irked with waiting for appointments, overcoming barriers of tough communications, and limited access to healthcare. Medico solves that by creating a platform for direct connection between doctors and patients. In Medico, you would be able to book appointments easily, do Zoom consultations, and have your prescriptions delivered via WhatsApp while leaving home. Payments are straightforward and secure via Razorpay, and since we aim to make everyone enjoy it, Medico makes use of multiple languages with Weglot. Everything can be stored securely as all of it can be housed under one roof with Cloudinary, so you never have to worry about losing anything important. This platform has been set up using reliable technologies like MERN (MongoDB, Express.js, React.js, and Node.js) to run everything fast and smoothly. We have built it to integrate tools such as Zoom for virtual consultations, Razorpay for payments, Ultrams for prescriptions, and Weglot for translation so that everything is under one roof without complications- everything works.

III. TECHNOLOGIES

Medico seems properly up to modern technology using state-of-the-art APIs that orientate user effort. Some of the very modern cutting-edge technologies are the following: User Interface Development by React.js. The end-user interface development is mainly dependent on very strong JavaScript libraries in building dynamic user experiences; therefore it uses component-based architecture for reusable code that reduces development time while increasing maintainability. Performance-wise, it utilizes React's virtual DOM which makes ordinary play faster during user experience updates. Integrating Varied API: zoom API: Telemedicine for the patients and the healthcare providers. Ultrams WhatsApp Business API: The most direct and secure way to send prescriptions to patients. Razorpay API: This payment service has all those required features which are required to send or receive money.

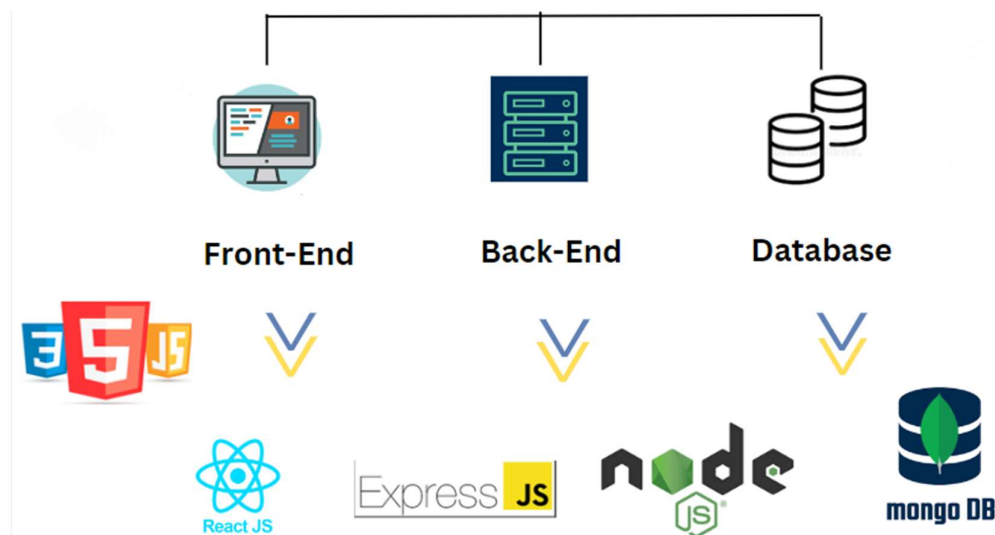


Figure 1

Cloudinary API: Mostly it's about hosting and scaling content on the web where it uploads images while storing them and fetches them during retrieval. Weglot API: It translates already the website into several languages so that the website can represent itself in many languages. All of these technologies and integrations allow Medico to offer telemedicine solutions, scalable and secure so that it is all about dynamic tools and systems creating easy-to-use real needs set by both physician and patient amid this contemporary healthcare environment. Deployments on ReactJS run supported by a very effective server-side environment, the Masternode, which is a Node.js application within which all our applications reside. Its inherent asynchronous nature means that this operation is very effective in serving requests from many different external users. Express.js offers straightforward routing, provision of middleware, and implementation of simple rules to create the logic of back-end structures. Most of the time, information about data could prove daunting and compromised; hence data storage here has been made through NoSQL databases, viz., MongoDB. So all details regarding patient appointments and medication information can be retrieved quickly, highly flexible in the schema design.

IV. PROPOSED WORK

Medico intends to simplify health care, rendering it faster and accessible for all-comers-whether doctor or patient. It is designed to put a patient in touch with his doctor as easily and efficiently as possible. We're starting with simplicity because that's the first step. Super easy to sign up, and you will be able to book an appointment without all the hurdles. A simple chatbot will help you out if you need assistance. That's all to say that we want everything to be intuitive and user-friendly-no one should "get lost or frustrated".

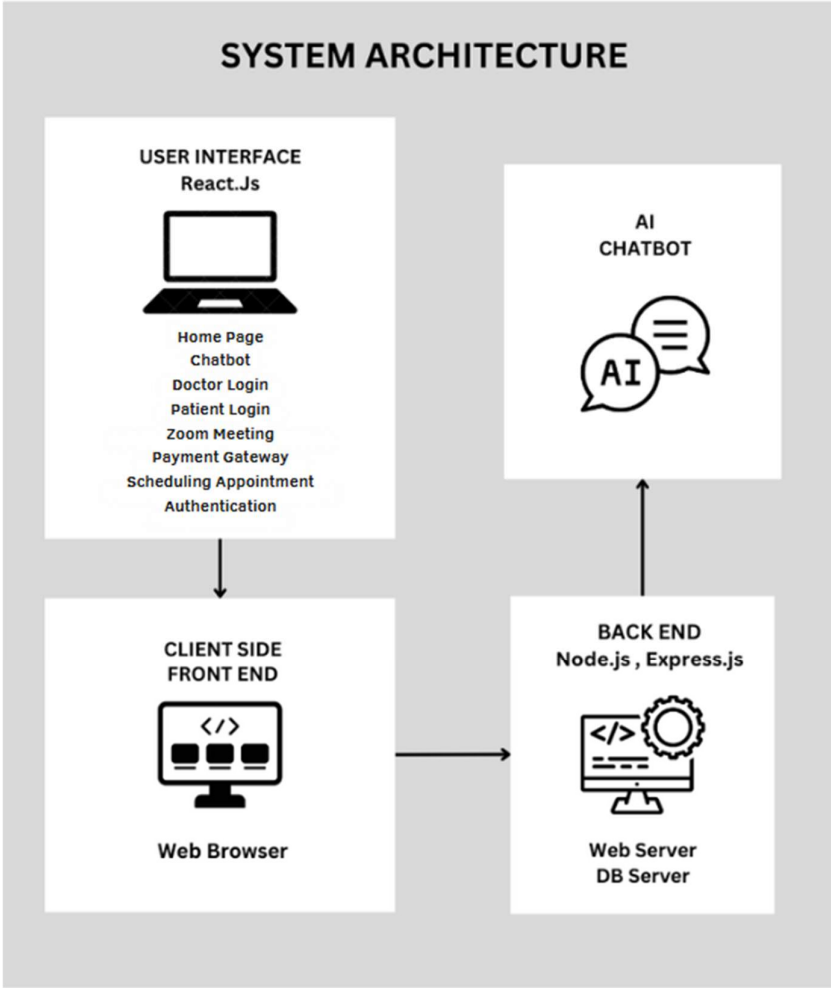


Figure 2

For consultations, we are integrating Zoom so the doctor can face you without leaving the comfort of your home. For a prescription, it will directly come to your phone through WhatsApp by Ultramsg. Razorpay is going to make the payment process smooth and secure. Ensuring all the people can use Medico is why it will be multilingual under Weglot, so do not worry about where you come from. However, all your medical documents and media will be stored using Cloudinary so that you do not need to worry about losing anything significant. Medico would leverage modern technologies like the MERN stack to develop itself from being reliable and swift to grow as we keep adding features. It will be built in phases, starting with the major focus core functionalities like booking an appointment and video consultation followed by all the integrations: Zoom, WhatsApp, Razorpay, etc. Medico would be establishing itself as a facilitator of making health care available more easily and quickly, as well as efficiently for patient-doctor connections.

V. FUTURE SCOPE

Medico is still at its nascent stage. It's going to get more interesting with so many things planned to make it even more beneficial for all those using it. One thing we are looking forward to is booking ambulances through the platform directly. When an emergency arises, time is of the essence, and finding and booking an ambulance quickly by just tapping could prove vital in the situation.

That is not all; we have also been refining the chatbot. At present, it helps you navigate through the use of the platform. In the coming days, it shall be able to do even more stuff. It should give some healthy tips for you, maybe guide you through minor symptoms. This will work best as a real-time healthcare assistant who is ever ready to support you. The more people are using mobiles to help them manage their healthcare, the more convenient Medico can be to have at your fingertips: that's why we're developing both iOS and Android-specific apps. You will be able to do everything for yourself, from appointments to consultations, right from your phone. We are also looking at the integration of wearable health devices.

Just put on a device that measures your heart rate or amount of activity and sends that immediately to your doctor. This is how to keep healthcare personalized and to become proactive in identifying potential issues before they become problems. Last but not least, we are also entering research with insurance companies. That way, those patients can get onto the platform to monitor their health spending and claims in a file-free billing environment. This is meant to be Medico's growth and transformation in a bid to continue changing and evolving health, even putting its head above water in transforming the convenience and easy access front into a new play.

VI. SURVEY ANALYSIS

Technologies are improving the health system and telemedicine has come out to take a great solution as one of the best options for patients, just like every other patient, post-pandemic. Virtual consultation continues to look brighter into any consideration for the future. AI and machine learning will transform the horizon, from diagnosis to treatment recommendations, and even healthcare chatbots will lead patients through their entire healthcare journey. Of course, the biggest drawback will be data security because people are not ready to risk their private health information. Digital literacy is another challenge. Many older people face a steep learning curve with the new techno-voodoo and require the simplest, uncomplicated access to a portal like Medico. Interoperability is another issue, given the multiplicity among the health systems that are not compatible with one another. Thus many patients suffer from poor coverage because of superficial in-therapy integration. Yet a great bright new promise is coming up tomorrow through digital health and wellness services. Wearables became the new ruling normals in medicine as a means for physicians to continuously have access to the health of their patients; health platforms integrating appropriate management with telemedicine have also been normally boosted into such donations and those come with convenience, accessibility, and personalization for everyone in healthcare delivery.

VII. CONCLUSION

It takes a step toward a better health experience, specifically through medicine boosted by technology. Medico, which connects people, provides a lack of impossibility by communicating with doctors and patients even further through virtual consultations, a secure payment facility, and a flexible schedule. But the battle fought is not yet over is the safety of data usage by all, and the interoperability among different systems. Above all, the sky remains the limit in digital health remote check-ups to the tracking of health with wearables. Small. Simple. That's what makes it effective and personal so the average person can easily manage his health. The future will

be bright for the constant innovations that will revolutionize this aspect of the health care system into a better, more humanistic, and more individualized direct-to-consumer health care.

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